PULP & PAPER

MAY 1958

The Story Many Have Been Waiting for – Scott at Everett

First comprehensive report on what this company has done at one of its biggest operations . . . see page 74

9 forms to fit your needs in

SOLVAY CAUSTIC SODA

. . . and all include Solvay extra services

To help you use Solvay Caustic Soda most *efficiently*, we make 9 forms. To supply it *rapidly* and *dependably*, we produce it in 5 widely-scattered plants. To aid you in applying it most *effectively*, we provide technical service and literature based on extensive field work with users and painstaking laboratory research.

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Caustic Soda • Calcium Chloride • Caustic Potash
Sodium Bicarbonate • Ammonium Chloride • Vinyl
Chloride • Chloroform • Methylene Chloride • Methyl
Chloride • Para-dichlorobenzene • Cleaning Compounds
Hydrogen Peroxide • Aluminum Chloride • Ammonium Bicarbonate • Soda
Ash • Carbon Tetrachloride • Monochlorobenzene • Ortho-dichlorobenzene
Mutual Chromium Chemicals • Snowflake® Crystals

SOLVAY dealers and branch offices are located in major centers from coast to coast.

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SOLVAY PROCESS DIVISION

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Please send without cost Solvay Caustic Soda sample or samples and literature as follows:

☐ 76% powdered ☐ 76% solid ☐ 76% ground ☐ 76% flake
☐ 76% small flake ☐ 50% liquor ☐ 73% liquor ☐ 50% mercury cell liquor ☐ 73% mercury cell liquor
☐ Technical Bulletin No. 6, "Caustic Soda"
☐ Wall chart of handling precautions

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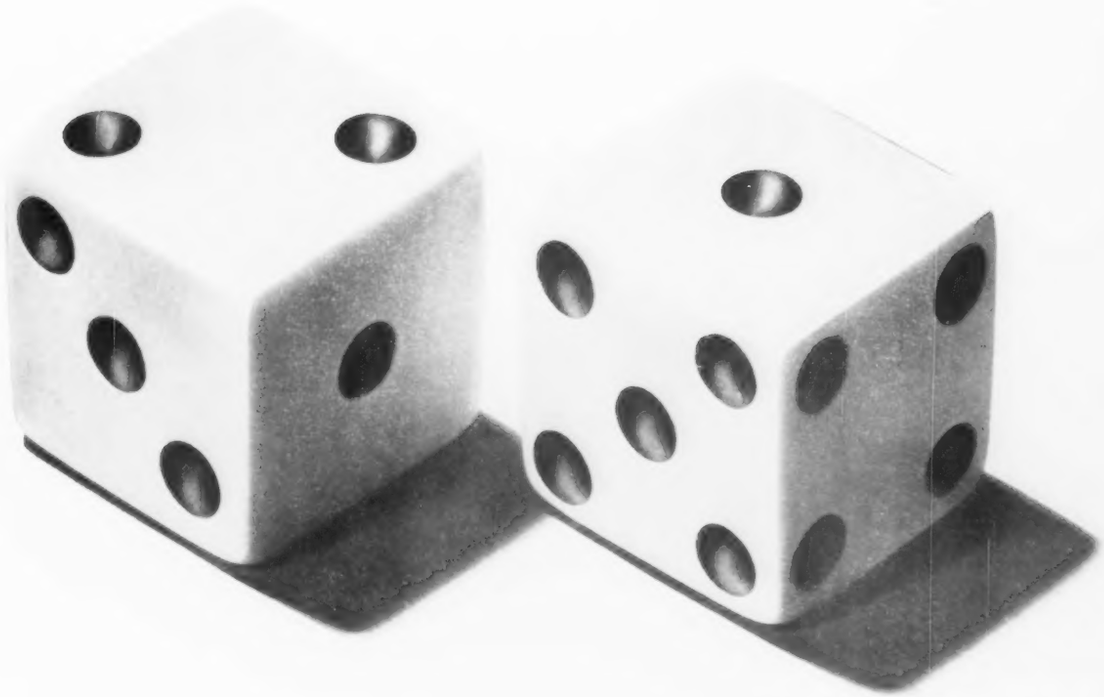

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ONLY the Rice Barton Trailing Blade Coater has been proven by 10 years of research and development.

ONLY the Rice Barton Trailing Blade Coater has been proven by 42 successful commercial installations.

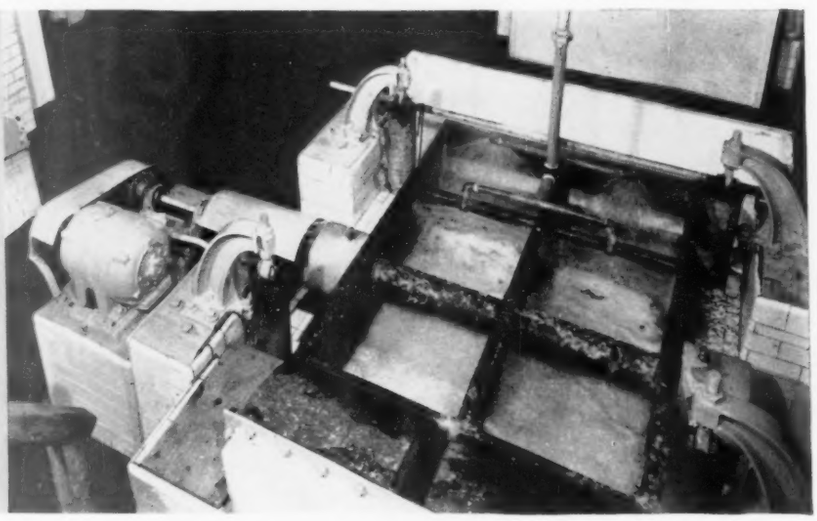
ONLY the Rice Barton Trailing Blade Coater is a sure thing!

RICE BARTON

RICE BARTON CORPORATION
WORCESTER, MASSACHUSETTS
Paper Machinery Builders Since 1837

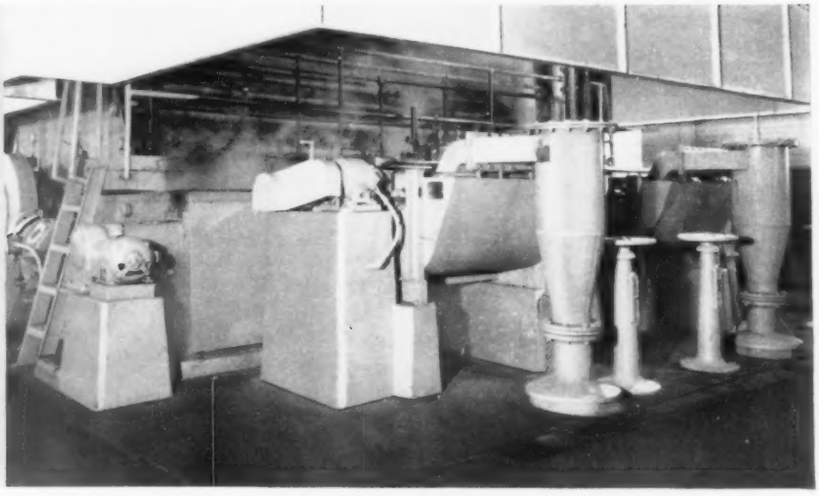
The **stamina** of the old...

This Bird Jonsson Screen has knotted nearly half a million tons of sulphate and is still going strong after steady operation for over fifteen years.



The **efficiency** of the new...

This neat installation delivers 250 tons of knot-free brown stock to a modern kraft washing system.



Wherever there's a job of knotting, bull screening or any kind of perforate plate screening to be done, Bird Jonsson Screens rate first consideration on the basis of their performance in scores of mills.

Capacity per screen runs 80 to 100 tons per day on sulphite, up to 200 tons on groundwood and kraft. Consistencies may be as high as 1½% on sulphite, 2½% on groundwood and kraft. Power cost is only about 0.06 HP per ton.

Write for recommendations, layouts and estimates.

BIRD MACHINE COMPANY, South Walpole, Massachusetts

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BIRD JONSSON SCREENS

PULP & PAPER

Reader's Guided Tour

VOLUME 32
NUMBER 5

P&P Panel on College Recruiting 53

As college graduations approach, a "blue ribbon" panel of industry leaders criticizes the proposals made last Fall by another panel of college placement directors in another P&P "special."

Third of Way thru '58—Isn't so Bad 59

Optimism bubbles to surface in several quarters. Sales show seven companies in quarter-billion dollar class. It is a mixed-up picture now, reports Editor Wilson, but some leaders see another good year.

New Uses to Take Up Slack 70

As everyone says, in these times the industry needs to find new uses. To stimulate this healthy trend, PULP & PAPER reports on some unusual new products which are being made from pulp, paper and board.

Push-Button Paradise at Crofton Mill 61

To make highest quality of market pulp, this Western Canada mill leaves little to human element. Louis H. Blackerby, Western Editor, describes new equipment including huge recovery units and oxidation system.

Here's Scott Story Many Have Waited For 74

First complete authoritative report on changes that have taken place over several years in pulp mill, paper mill and converting division of Scott Paper Co's big operations at Everett, Wash.

● PULPWOOD SECTION

● OTHER DEPARTMENTS

A word about Bill Davis; P&P editorial honor; Why a forest "czar" in B.C.

COVER PICTURE

Aerial view of Scott Paper Co. West Coast Div. plant at Everett, Wash. Plant is entire area below ships and parking lot. Pulp mill is lower left; paper mill top right, power plant, shop, wood mills and storage facilities in center.

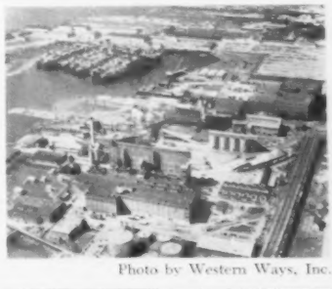

Photo by Western Ways, Inc.

CIRCULATION DEPT., 500 Howard St., San Francisco 5, Calif. C. C. Baake, Circ. Mgr. Send subscription orders and changes of address to PULP & PAPER, above address. Include both old and new addresses.

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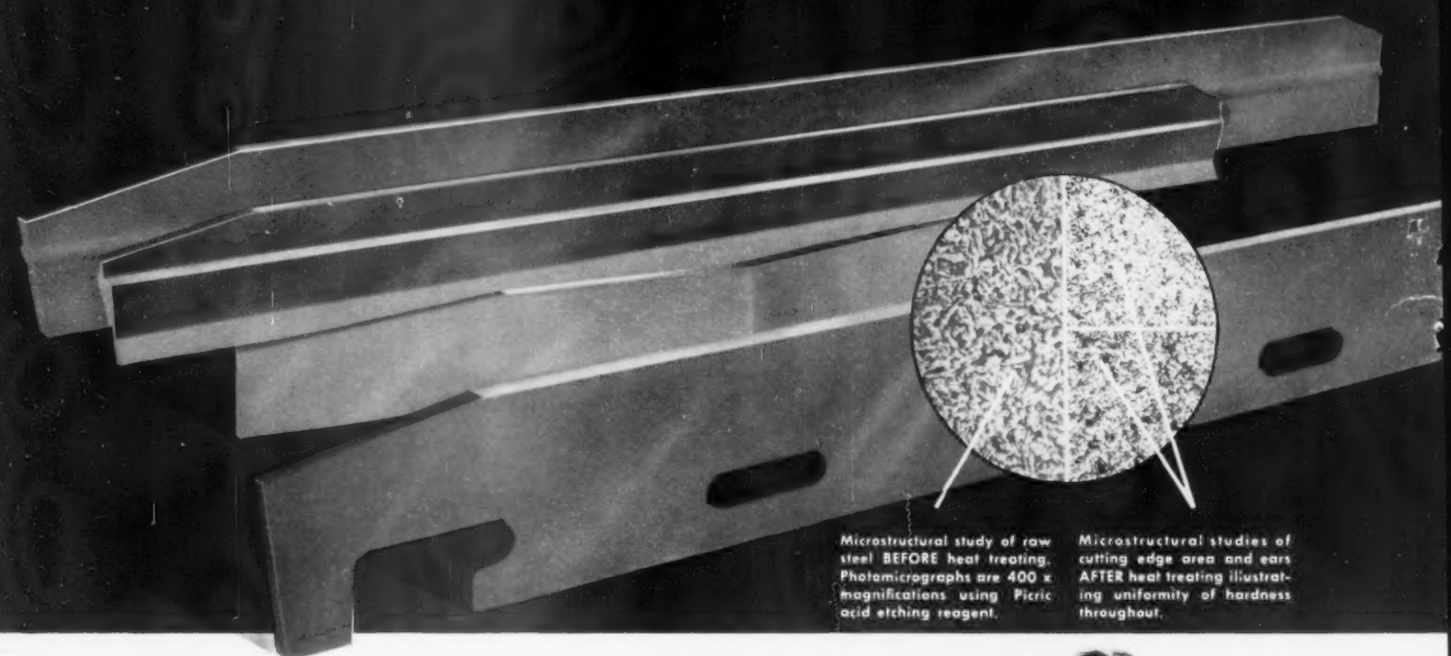
WHY *Microlyzed** JORDANS ARE NOTED FOR ENDURANCE



Microstructural study of raw steel BEFORE heat treating. Photomicrographs are 400 x magnifications using Picric acid etching reagent.

Microstructural studies of cutting edge area and ears AFTER heat treating illustrating uniformity of hardness throughout.

Regardless of the stock, consistency or pressure, MICROLYZED Fillings by BOLTON lead in providing what papermakers want most in Jordan Fillings . . .

LONG WEAR *because they are custom-processed from specified Jordan steel to a precise balance of hardness and toughness.*

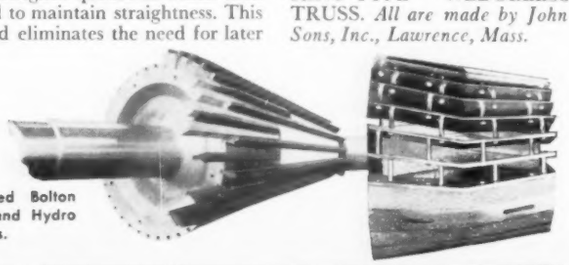
EVEN WEAR OF PLUG AND SHELL KNIVES *because of guaranteed uniformity of hardness in each set of fillings and throughout each knife in the set.*

In the manufacture of Jordan Fillings, Bolton controls the entire process. Starting in the laboratory, a photomicrostructural analysis is made of each shipment of Jordan steel. Destructive mechanical properties tests are made, which must fall within the rigid tolerance standards established. During production, nondestructive tests assure the desired properties previously determined are achieved during heat treatment.

Furnace temperatures are controlled to within tolerances of 5 degrees. Hardening is done in a BOLTON-designed quench in which each knife is clamped to maintain straightness. This exclusive method eliminates the need for later straightening. Papermakers receive the benefits of a stress-free product.

Knowing that performance is a reflection of the materials used and the degree of skill and care shown in fabrication, no compromise is permitted at BOLTON.

Fifty two years of specialized Jordan Fillings experience is built in to every knife. So is the craftsmen's attitude — an attitude of conviction that none will deliver longer, more economical, day in day out resistance to wear than BOLTON MICROLYZED FILLINGS . . . RING TYPE — WEDGELESS — HYDRO-TRUSS. *All are made by John W. Bolton & Sons, Inc., Lawrence, Mass.*



Partially assembled Bolton Wedgeless Plug and Hydro Truss Shell Fillings.

The Papermaker suggests:

Write today for Bulletin No. F-556 on Bolton Microlyzed Fillings. It has full information on:

- *Wedgeless Plug Fillings*
- *Hydro-Truss Shell Fillings*
- *Ring Type Fillings*
- *Special Heat-Treated Steel*
- *Bolton Stainless Steel*
- *Bolton Phosphor Bronze and other alloys*
- *Fillings Separator Materials*
- *Knife Sizes*
- *Stainless Steel Plug Jackets*
- *Technical Advisory Service*
- *Instruction Charts on Changing Fillings*

BOLTON EMERSON

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OVERSEAS: United States Machinery Co., Inc. 90 Broad Street, New York 4, N. Y.

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The Editor Reads His Mail

Address letters to The Editor, PULP & PAPER, 1791 Howard St., Chicago 26, Ill.

What's There To Cry About

—New York

Editor: As a friend I wonder if I might ask you if I should really be worried because I have cast my lot with the paper industry!

Are crying towels in order because present figures show the industry is way down to 89% of its capacity?

I might have been in steel where current figures show 55% operations . . . or automobiles, off 23.3% in January 1958 against January 1957.

Of course, I can even remember 1932—when paper and board never went below 58%, but steel went to 19.7% of capacity.

So tell me, Mr. Anthony—do you think those of us in paper are doing fairly well? I think so!

KENNETH D. LOZIER
Vice President
St. Regis Paper Co.

A British Invention: Double Fourdrinier

—Bristol, England

Editor: Here is some further information about our "Inverform" invention.

The double Fourdrinier paper machine is in fact a unit capable of manufacturing paper and/or multi-ply paperboard. The new principle, for which patent applications have been made (the U.S. Patent was expected to be published in January), has been evolved as a result of experimental work over the past six years.

Trial runs on our pilot machine have proved so successful that we are having one of our full-scale board machines adapted to the "Inverform" process and this is expected to be ready for operation in June next.

In addition, another mill in this country is installing an "Inverform" unit on one of their paper machines and it is hoped to make further test runs some time in June or July of this year.

R. S. THOMAS
Managing Director.
St. Anne's Board Mill Co., Ltd.

Coating Article Wins Honors

—New York

Editor: We are pleased to report that in line with the judges' decision, the article entitled "What is Required in Coated Paper for High Speed Letterpress Printing (Apr. 1957 issue of P & P) is to be included in "Graphic Arts Progress—1958."

May we offer our congratulations on the overall quality of your editorial content, as evidenced by this merited high rating.

JACK K. BARRY
Fraser Paper Ltd.

(See last page of this issue for editorial comment.)

We Just "Annexed" Canada!

Gardenvale, Que.

Editor: I was amused to see that you have finally accomplished annexation: "$500,000,000 will be spent by American producers of forest products on capital expenditures in 1958. A major portion will be in pulp and paper. An example—one British Columbia producer plans to spend $1,000,000 on new equipment" (page 7, April issue).

In fact Canada takes quite a beating in this issue: "Canada today has been compared to the United States in the early 1900's. . . ." (page 70, April issue). I hasten to add that this was a very well-written and interesting story. . . .

BRIAN H. TAYLOR,
Managing Editor,
Pulp & Paper Magazine
of Canada

Thanks, Anne Toomey, For Being Gentle with Us

—New York

Editor: I was glad to see you at our annual luncheon. . . . I was reading your March issue and all I can say is that the newly elected officers are going to be pretty annoyed at the nominating committee . . . those "SAPI Officers Elected" . . . page 145 . . . happen to be the members of the nominating committee and since they didn't even include me, I guess they'll just have to get along by themselves. I guess the error was a misinterpretation of my release which gave the names of the committee. I am now enclosing the slate of officers which were elected (see page 135).

It's more human of us, isn't it, to make a mistake now and then!

ANNE G. TOOMEY
Executive Secretary, SAPI

General Outlook

SEVEN COMPANIES HAVE 1957 SALES OVER $250,000,000. . . . Topped by International Paper with $940,428,000, Crown Zellerbach, Weyerhaeuser, St. Regis, Kimberly-Clark, Scott and Container Corp. of America are the "super seven." Kimberly-Clark and Scott showed increases over 1956, Crown Z was about the same and others were down a little. Almost all showed decreases in net earnings. Roy K. Ferguson, chairman of St. Regis, expects 1958 to be better than '57. Crown Z's first quarter sales were up. Powell River expects a poorer year (see article page 59). . . .

SEES WORST OF RECESSION OVER. . . . Dr. Jules Backman, professor of economics at New York University, says the major part of the economic decline is now behind us and a new plateau will be established near the current level of activity. Recovery from this plateau promises to be slow, he says. . . .

$30,000,000 "FROZEN." . . . A survey by a Boston advertising agency reveals that among its clients alone, $30,000,000 in purchase proposals have been frozen "because of management's refusal to spend." These are not long-range capital expenditures but are for equipment and supplies vital to efficient operation, product improvement and cost reduction, says the agency. It urges industrial management to relax what the agency describes as "a suicidal no-expenditures policy." . . .

REST OF '58 LOOKS HOPEFUL, Charles E. Young, economist for Weyerhaeuser Timber Co., recently told a lumber group in Tacoma, Wash. His prediction is based on the likelihood of expanded home market this year due to more ample supply of funds and relaxation of government regulations on down payments and other mortgage guarantee requirements. He said it may still take several months for the improvement to gather steam. . . .

PLAN $30,000,000 MILL IN CALIFORNIA. . . . Champion Paper and Fibre Co., Hamilton, O., with one or more undetermined partners, plans to form a subsidiary, Shasta Pulp and Paper Co., to erect a pulp and paper mill near Fairfield, Calif., 60 mi. northeast of San Francisco, if water problems can be worked out with the state. Herbert T. Randall, Champion's vice pres. of research and engineering, is acting as president of the new company, with an office with Dunnell and Herbert, Solano County Tile Co. building, Fairfield. Stanford Research Institute is making a market survey. . . .

BUTLER BUYS MAJOR INTEREST IN REX PAPER. . . . A syndicate headed by Paul Butler, of Butler Co., Chicago, whose distributing division has wholesale paper branches in 20 cities, has acquired control of Rex Paper Co., founded in Kalamazoo in 1915 by John F. King, former Kalamazoo Paper Co. supt. A new Butler paper process is to be introduced. Rex does off-machine coating and makes printing papers. Mrs. Helen King, widow of the founder's son, continues as president and J. E. Lean as exec. v.p. . . .

BORROWS $30 MILLION. . . . Union Bag-Camp Paper Corp. has arranged a $30 million loan from Equitable Life Assurance Society of the U.S., payable in installments of $10 million each to be used for plant expansion programs at Savannah, Ga., and Franklin, Va. New machines are going in each mill in 1959 and 1960. . . .

Please turn page for more

ESCO

LIGHT-WEIGHT LAP JOINT STUB ENDS

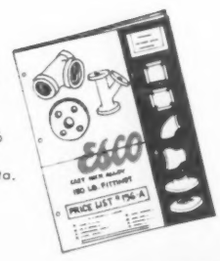
Now you can eliminate time consuming and expensive, hand-cut, lightweight stub ends that make welding inspection difficult.

ESCO Lightweight Stub Ends are designed to keep operational unit stresses low throughout the stub end, particularly at the critical area where the pipe joins the stub.

Made for use with 10-14 gauge fabricated pipe, these lightweight stub ends make inspection easy because the flange does not hide the weld.

Cast in nominal tubing sizes from 2″ through 20″ and IPS sizes 2″ through 24″ in *ESCO* Alloy 45S (Type 316), these lightweight stub ends are conveniently warehoused in sufficient quantities for immediate delivery.

See your ESCO dealer.
Ask for ESCO Catalog No. 156 containing dimensional data.



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MFG. PLANTS AT PORTLAND, ORE. AND DANVILLE, ILL.
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IF SELLING IS TO BE DONE, it's up to advertising to awaken the desire, and it's up to installment credit to make the realization possible, says Charles H. Brower, president of Batten, Barton, Durstine & Osborn. The best way to get consumers back in a buying mood, he says, is for advertising to awaken their interest. . . .

WILL DOUBLE CAPACITY. . . . Kimberly-Clark Corp., Neenah, Wis., awarded contracts to double the capacity of a new plant at New Milford, Conn. When completed next December the plant will produce 150 tons daily of creped wadding. It will install a second multimillion dollar machine. The first machine is set for startup this month.

CELOTEX PLANS TO SPEND $10 MILLION on capital improvements during fiscal '58, even though the year is off to a slow start, according to O. S. Mansell, chairman. "We are still confident that 1958 will be a good building year," he said. . . .

NATWICK MOVES TO BATON ROUGE. . . . John Natwick, inventor of the Natwick-Noralyn continuous semi-chemical pulping process which is to be introduced in a new mill being built in St. James Parish, Louisiana, has moved to new offices of Noralyn Paper Mills, Inc., 316 Triad Bldg., Baton Rouge, La. He will work closely with consulting engineers, Barnard & Burk Inc., 1023 Nicholson Drive, Baton Rouge. Leo L. Stack, president of the new pulp and paper company, heads Noralyn's general offices in the Giddens Lane Bldg., Shreveport, La. . . .

NEW DIGESTER TO START UP DURING THIRD QUARTER of 1958 at Columbia Cellulose Co., Ltd., Prince Rupert, B.C. This will be the seventh digester for Columbia Cellulose, subsidiary of Celanese Corp. of America. Another subsidiary, Celgar Ltd., obtained a $1,500,000 loan from Celanese to begin construction of a pulp mill in the Arrow Lakes area, to be completed by March, 1961. . . .

New Mills and Mill Plans

BEGIN WORK ON NEW COLOR PLANT. . . . A new color plant, designed by The Mead Corp.'s engineering staff at Chillicothe, O., will include process equipment, electrical control station, a testing laboratory and storage area. Completion is scheduled for early 1959. . . .

LET TIMBER OPTION LAPSE. . . . A group headed by Robert Campbell, Vancouver, has indefinitely postponed plans for a $60 million pulp and paper mill near Prince Albert, Sask. "We are allowing our timber option to lapse, but that doesn't mean that we're giving up the idea altogether," Mr. Campbell told PULP & PAPER. . . .

RIEGEL CAROLINA MILL NEARING STARTUP. . . . Riegel Carolina will start its paper machine at Acme, N.C., any day now. It will be producing upwards of 250 tons of special foodboard, tabulating cards, tags, folding stock and other items by midyear. More than half will go into special foodboard. Dr. A. L. M. (Loy) Bixler is manager of paper production and Brookshire Moore, formerly with East Texas, is the new paper supt. . . .

OPENS $2,000,000 ANNEX. . . . Milprint, Inc., recently opened a new $2,000,000 annex at its Downingtown, Pa., plant. It will produce cartons and polyethylene and cellophane in rolls, sheets and bags. . . .

Please turn page for more

WILL CONSTRUCT $800,000 PLANT. . . . Martin Paper Products Ltd. begins construction this spring of a container plant at Regina, Sask. Start of production is scheduled next fall. MacMillan & Bloedel Ltd., Port Alberni, B.C., will be main supplier of board. . . .

Other News

OXFORD PAPER ACQUIRES NATIONAL GEOGRAPHIC SUBSIDIARY. . . . Oxford Paper Co. entered into a long-term contract to supply paper requirements for National Geographic Magazine at the same time it signed a contract to acquire National Geographic's subsidiary, Champion-International Co., Lawrence, Mass., producer of high quality coated printing papers. . . .

PAPER PRODUCT FIRM CHANGES HANDS. . . . A Canadian group, headed by Samuel J. Smiley, Leo O. L'Esperance and Louis Schneider, all of Montreal, bought control of Doeskin Products, Inc. from a group of Cubans who obtained control last November. Leon Henderson continues as president. Doeskin sold its Doepac div. to Cellu Products Co. of Patterson, N.C. . . .

INTRODUCES BILL FOR PILOT NEWSPRINT MILL. . . . Sen. Proxmire (D., Wis.) introduced a bill (S.3372) to provide financial assistance to construct an experimental pilot plant to encourage the development of a newsprint industry based on hardwoods in Wisconsin. Research funds are also requested. . . .

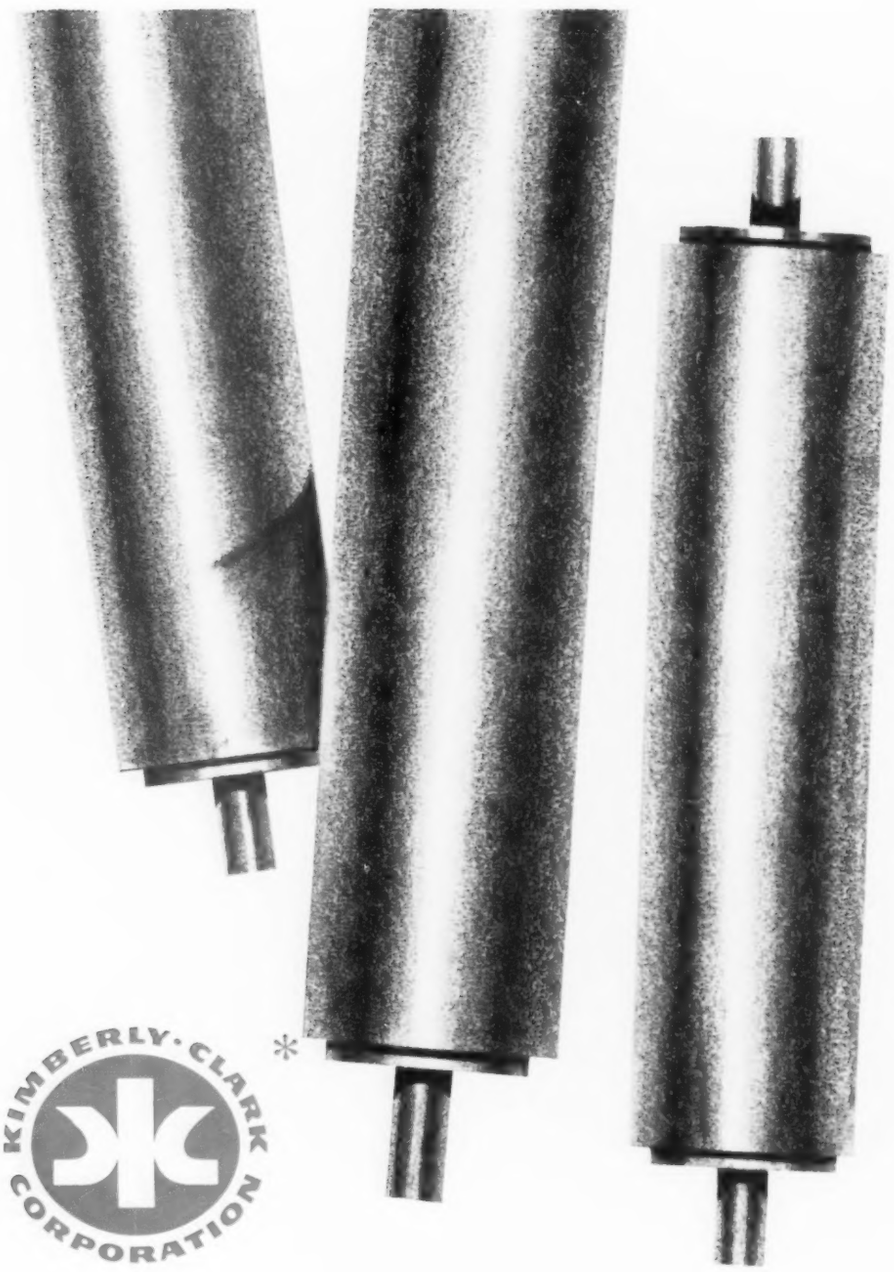
HINT OF THINGS TO COME? . . . David L. Luke, president, West Virginia Pulp and Paper Co., says, "We have begun to wonder whether it is necessary or economic to go through all the involved chemical processes required to produce a product such as cellophane and other films. We have an idea that we can produce them more simply and cheaply from woodpulp." . . .

BRITISH COLUMBIA HAS NEW SOURCE OF SULFUR. . . . Jefferson Lake Sulphur Co. recently completed a $2,200,000 extraction plant at Taylor, B.C. Two more Canadian plants will be built in Alberta, near Calgary. . . .

WILL DEVELOP USE OF SYNTHETIC FIBERS FOR PAPER. . . . DuPont Co. leased pilot plant facilities from the Riegel Paper Corp., to be operated by Riegel personnel. Information on the use of synthetic fibers in paper, developed by the program, will be disseminated to the paper industry by DuPont. . . .

PATENTS DEVICE TO REGULATE FLOW OF STOCK. . . . John R. Fanselow, Appleton, Wis., has assigned to Kimberly-Clark Corp. a patent he received for a device to regulate paper stock consistency. His equipment includes a means of combining two flows of stock containing different percentages of papermaking substances, a bleed line for continuous sampling and an arrangement for forming a pond of such stock, whose depth varies with its consistency. A float sets off the consistency control mechanism. . . .

CHEMICALS CONSUMED BY 33 MILLS in Ore. and Wash., totaling 800,000 tons in 1956, included: alum, 33,109 tons; caustic soda, 71,798; chlorine, 113,959; clay coating, 32,376; clay filler, 21,238; dyestuffs, 548; latex, 487; burnt lime and limestone, 149,992; wet-strength resins, 4,642; salt cake, 95,163; sizing, 27,958; slime killer, 567; starch, 29,066; sulfur, 146,652. Several firms estimate their chemical consumption will increase more than 10 % by 1960. . . .



* 25 of the 25 largest paper companies use S-W rolls and roll re-covering service.

S-W . . . *roll service puts more profit in paper.*

STOWE-WOODWARD, INC. Griffin, Georgia • Newton Upper Falls, Mass. • Neenah, Wisconsin
On the West Coast: HUNTINGTON RUBBER MILLS, INC., Seattle 88, Washington

WORLD PULP & PAPER General News

One-Man Pulp Mill in Sweden

Stockholm . . . A 70,000 ton sulfite pulp bleaching plant, so highly automatized that it is virtually run by one man, is now in full-scale operation near Gävle, Sweden, after a six-month test. The Marma Langror management developed the equipment in cooperation with AB Kamyr, Karlstad. There are 400 control gauges, including signalling and curve-writing instruments, 200 operating devices, 30 automatic governors to regulate the necessary processes of admixture, temperature, etc. For example, the quantity of bleaching agents is automatically regulated in proportion to the quantity of pulp fed to bleaching towers. There are 35 miles of cables and wires connecting process towers with the control room where the entire bleaching process can be surveyed from an 80-ft. panel.

Turkish Investors to Back Mill

Ankara, Turkey . . . Turkish investors plan a pulp and paper mill in the Adana district. Annual capacity will be about 40,000 tons each of pulp and paper. At present Turkey has three pulp and paper mills and must rely on imports to meet demand.

Discuss FAO Office for Africa

Accra, Ghana . . . The Food and Agriculture Organization of the UN invited African member countries and observer delegates to a meeting at Accra from Apr. 28 to May 2 to make plans for setting up an FAO regional office in Africa as soon as possible. B. R. Sen, FAO director-general, said African countries are increasing the pace of their economic and social development and the time has come for FAO to support their efforts.

European Pulpwood Prices Drop

Geneva, Switzerland . . . Noticeable price reductions from the 1957 level have been recorded in Swedish and Soviet pulpwood sales to continental Europe, reports the United Nations Economic Commission for Europe. A principal development during 1957 was increased buying of timber from European rather than Canadian and other overseas sources because of high ocean freight rates.

New Brazilian Mill Financed

Canoas, Brazil . . . The International Finance Corp. has agreed to a $1.2 million investment in Olinkraft, S.A., Celulosa e Papel, Brazilian subsidiary of Olin Mathieson Chemical Corp. Initially Olinkraft is purchasing an existing kraft pulp and paper mill, a hydro-electric power plant and long fiber Parana pine timberland at Canoas, Sta. Catarina province. During the year it will install new equipment to raise production to about 38 tons a day of unbleached kraft pulp, paper and linerboard. As soon as economically feasible, capacity will be expanded to 80 tons per day. Total investment is $4,400,000.

Continuous Pulping in Japan

Tokyo . . . The first Pandia continuous kraft pulping operation in Japan started up recently at Takasaki Paper Mfg. Co.'s Nikko mill near Utsunomiya, north of Tokyo. Production is 132 tons per day of kraft pulp for linerboard, from beech and Japanese pine. Pulp for kraft paper will also be made. Pandia service engineer, David Morton, assisted M. Yohitoshi, vice pres. of Takasaki, and K. Takuchi, managing director, in supervising startup. The Pandia consists of a 15-in. screw feeder, four 42-in. diameter digester tubes with recirculation and a 28-in. discharger.

Sugar Firm Plans Bagasse Mill

Tucuman, Argentina . . . Nunorca, an Argentine sugar concern, plans to build a bagasse paper mill in Tucuman. It is reported that they hope to buy necessary equipment on credit terms in the U.S.

Israel Gets New Carton Plans

Lod (Lydda), Israel . . . Cargal Co. laid the cornerstone for its second corrugated container plant at Lod recently. Its other plant is at Bnei Brak. The new plant, to be completed in August, will employ 1,000 workers.

Opportunity in Ecuador

Quito, Ecuador . . . Near the Pacific coast of Ecuador 150,000 acres of tropical virgin forest are available for installation of pulp and paper mill and chipboard industry. The site has good drainage, mild tropical climate and relatively cheap labor. Write to Project No. 44-A, Ecuador, Inter-American Investment Opportunity Service, International House, 607 Gravier St., New Orleans, La.

Plan British Packaging Center

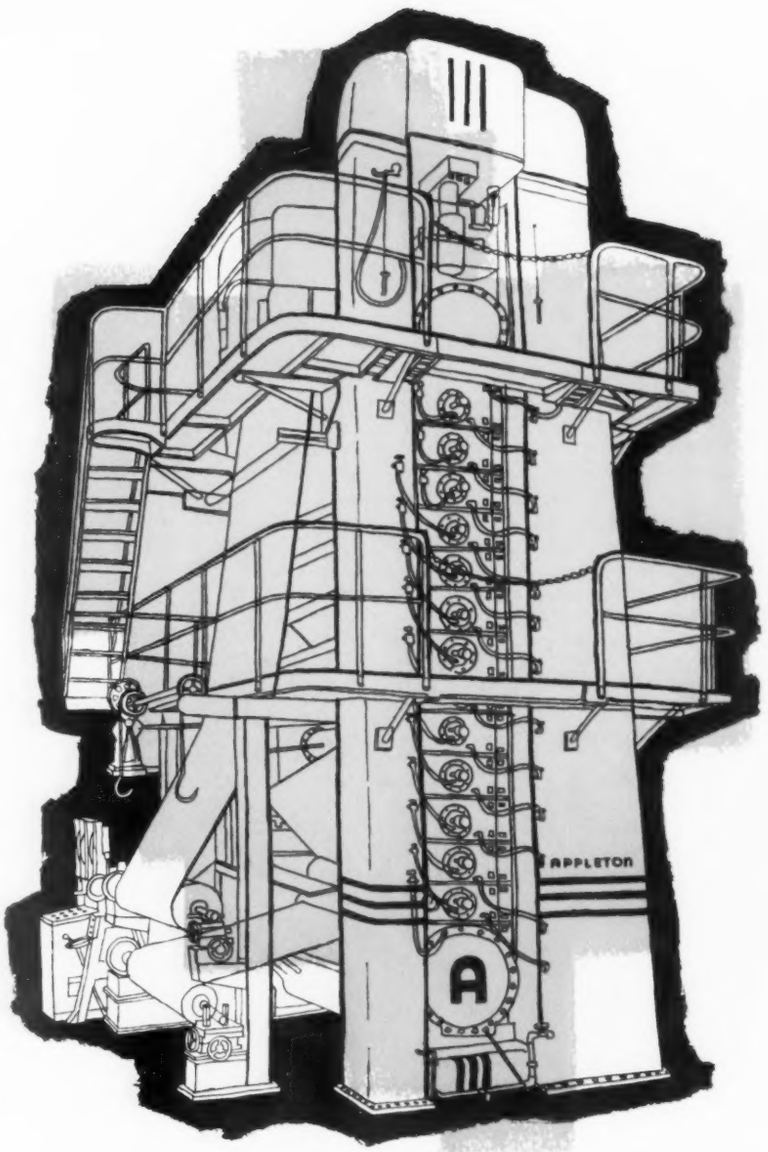
London . . . The Institute of Packaging is establishing a permanent packaging center at 50 Poland St., W.1., London. It will house a permanent but changing exhibit of packages, material, equipment and methods, emphasizing new developments. An information bureau and technical reference library will be included.

Soviet-Swedish Treaty

Stockholm . . . A Swedish-Soviet trade agreement has been signed in Stockholm. It foreshadows a practically unchanged commodity exchange for 1958. Swedish exports to Russia will include 10,000 tons of viscose pulp and 6,000 tons of rayon pulp.

English Equipment—130 Years Old

This type of equipment is still usable for making finest book, engraving or watercolor paper. Brought from Hodgkinson Paper Mill, Wookey Hole, South England, to Institute of Paper Chemistry, Appleton, Wis., U.S.A., this is a vat, lifting box and knotter . . . 3 men could make 4 to 6 reams a day. Picture courtesy Beloit Irons Works.



In the past 11 years, the Appleton Machine Company has built over 71% of all the supercalenders made or sold in the United States and Canada. The reason for this record is simple: *confidence* . . . confidence in Appleton's experienced design and production staff to build equipment that pays-off with profitable performance. No matter how exacting the specifications—from the largest supercalender ever erected in the United States to the highest pressure glassine stack—Appleton's touch with the tough ones is a proven fact. Write or call your Appleton representative. He has an enviable record for problem solving.

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WORLD PULP & PAPER Technical News

Results with Swedish Barkers

WURZ, OTTO. Das Papier 11, no. 23/24: 548-52 (Dec., 1957). [In German; English and French summaries] Bull. Inst. Paper Chem. 28: 915.

Whereas the Bark-Lasse and Barklet barkers are suitable for forest use only, the Cambio barker can also be applied in pulp mills if preceded by a log-steaming installation. Only 3 hr. of steaming time is required. Barking steamed wood with the Cambio does not affect brightness of unbleached pulps and decreases resin content, thus reducing pitch troubles. Cambio 54 and 66 models are of direct interest to saw mills and pulp mills processing slabs. C.L.B.

Dutch Measure Paper Stiffness

ROYEN, A. H. H. VAN. Papierwereld 12, no. 5: 107-12 (Dec., 1957). [In Dutch; English summary] Bull. Inst. Paper Chem. 28: 987.

Experience obtained at the Fibre Research Institute T.N.O. in Delft with use of three paper-stiffness testers, namely, the Bekk, Sharman, and NBS instruments, indicated good correlation between results obtained with the first two apparatus; both gave identical stiffness values in g.-cm. which agreed with those calculated from the elastic modulus obtained from creep measurements by extrapolation. Manual evaluation of a series of papers ranked them in the same order of stiffness as did measurements with the three instruments, indicating that the data reflect a truly material-inherent property. C.L.B.

Pitch Trouble in Sweden

BACK, ERNST. Svensk Papperstidn. 60, no. 24: 905-10 (Dec. 31, 1957). [In Swedish; English and German summaries] Bull. Inst. Paper Chem. 28: 990.

In the alkaline extraction stage of sulfite-pulp bleaching, free resin acids are dissolved as soap anions, a portion of water-insoluble resin components are solubilized by soap micelles, and undissolved resin particles are dispersed and stabilized by the negative charge of soap anions. None of these components will be removed completely by subsequent filter-washing. Any following bleaching stage (e.g., with calcium hypochlorite or chlorine dioxide), therefore, involves the risk of reprecipitating and coagulating resin particles to a size leading to possible pitch deposition. To prevent this, the pulp resin must be stabilized in advance, preferably by nonionic hydrophilic or stable anionic groups introduced by surface-active agents. Factors affecting pitch control during bleaching are discussed. C.L.B.

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In Austria—High Yield Pulps

SADLER, H., and TRANTINA, O. Osterr. Papier-Ztg. 63, no. 7: 17 (July, 1957). [In German] Bull. Inst. Paper Chem. 28: 998.

The shearing strength (I) of high-yield pulps (acid calcium bisulfite, sodium bisulfite, and neutral sodium sulfite cooks) was determined for different cooking times and temperatures; change in (I) were assumed to parallel changes in the degree of fiberization. A definite relationship between (I) and cooking conditions was observed. (I) decreased with prolonged cooking times, particularly at higher temperatures, and increased with the degree of neutralization or buffering of sulfur dioxide. Approximately equal (I) values were shown by acid sulfite pulp cooked at 120°C., sodium bisulfite pulp at 150°, and neutral sulfite pulp at 180°. J.S.

France—Repels Water, Absorbs Ink

MARTIN, GERARD. Progress in offset printing. Imprimerie Nouvelle, no. 20: 12-13, 15, 17, 19 (Sept., 1957). [In French] Bull. Inst. Paper Chem. 28: 980.

The MN surfacing procedure recently developed in France completely eliminates difficulties in color offset printing caused by dimensional instability of paper. The procedure takes advantage of differences between surface tension of water and that of organic liquids in composition of printing inks. It imparts to paper properties similar to those of rubber by deposition on its surface of extremely fine mineral particles (1-2μ in diameter) which form a discontinuous hydrophobic barrier thus preventing water droplets from wetting the surface and, at the same time, permit penetration of organic liquids of low surface tension. From several months of manufacturing and service experience it is concluded that the MN procedure results in a perfect dimensional stability of paper and in definite improvement of printing quality. J.S.

Continuous Kraft Cooks—Russia

KOSAYA, G. S. Effect of temperatures. Bumazh. Prom. 32, no. 4: 4-7 (April, 1957). [In Russian] Bull. Inst. Paper Chem. 28: 912.

Sprucewood chips of two different sizes (36 x 8 and 16 x 2 mm.) were soaked in white liquor of 25.8% sulfidity (44.5 g. liter of sodium hydroxide) for 15-120 min. 100° C. and then digested 40 min. at 190°. Even after 120 min. of soaking, coarser chips gave a lower yield and a higher percentage of undercooked pulp (I). The yield was only slightly increased (from 32.6 to 38%) and the (I) was only slightly decreased (from 20.4 to 14%) when concentration of sodium hydroxide was increased to 89 g. liter. Yield and strength properties of pulps obtained from fine chips were higher than those obtained from a 1 : 1 mixture of fine and coarse chips. Results indicated that, in a continuous kraft process, good results may be obtained only with fine chips. When fine chips of uniform size were cooked at 170° for 70 min. or at 200° for 13 min., the yield was substantially lower at 200°, owing to more extensive cellulose degradation. The percentage of (I) was also greater at 200°, apparently because of the relatively slow increase of diffusion rate as compared with increase of reaction rate. Preliminary steaming for 1 hr. at 100° caused a slight decrease in yield, particularly with chips of low moisture content, indicating an interference with liquor penetration. It is suggested chips of 15-18 mm. length and temperature of 170-180° be used in continuous kraft prehydrolysis process. J.S.

Elucidating Structure by X-Ray

BECHERER, G., and VOIGTLAENDER-TETZNER, G. Naturwiss. 42, no. 21: 577-8 (1955). [In German] Bull. Inst. Paper Chem. 28: 491.

Results of x-ray studies of cuprammonium lignin, lignin nitrate, and Scholler lignin are reported. The data obtained are interpreted in favor of the amorphous, tridimensional, branched-chain structure suggested by Freudenberg. No evidence was found to support the hypothesis of a crystallite structure of lignin. J.S.

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To produce quality pulp for quality papers, Weyerhaeuser stresses rigid control throughout the mill.

For instance, at our Everett Kraft Pulp Mill, 131 readings, tests and reports are made on process variables every hour. And before it is baled and shipped, the finished pulp is subjected to ten major control studies. No effort is spared to make Weyerhaeuser pulp a consistently pure and uniform product that paper-makers can and do rely on.

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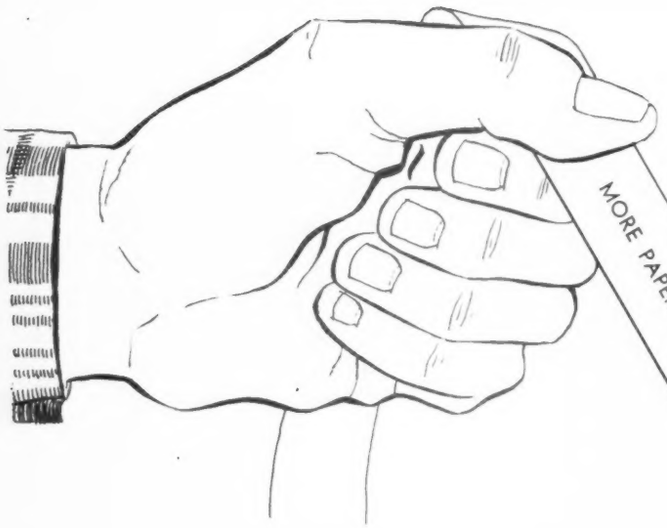

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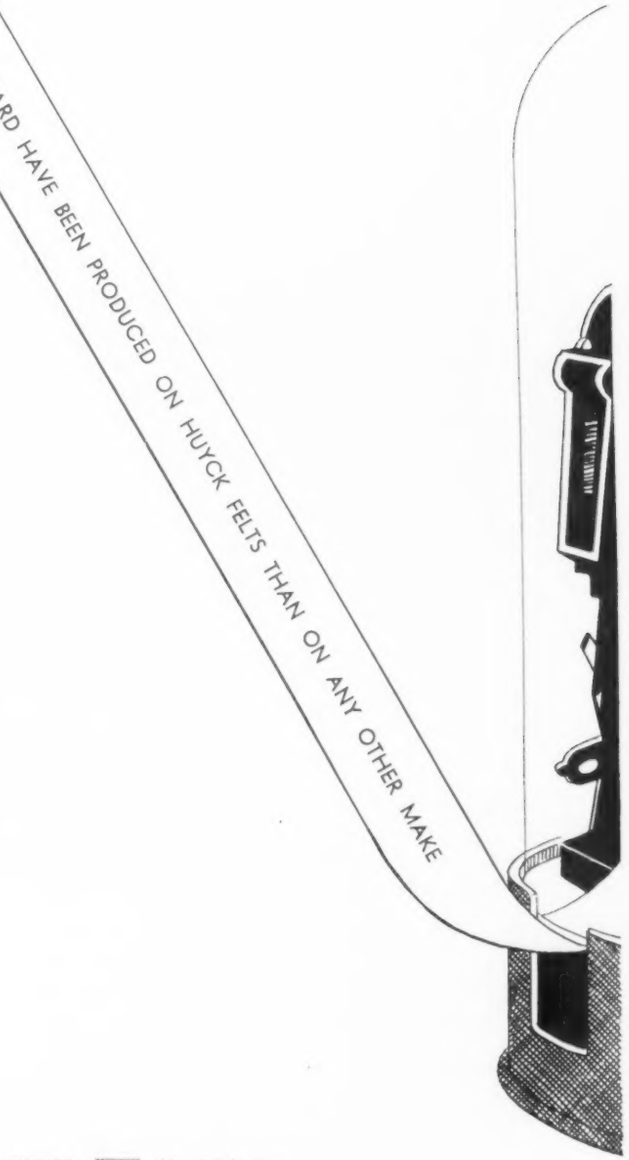

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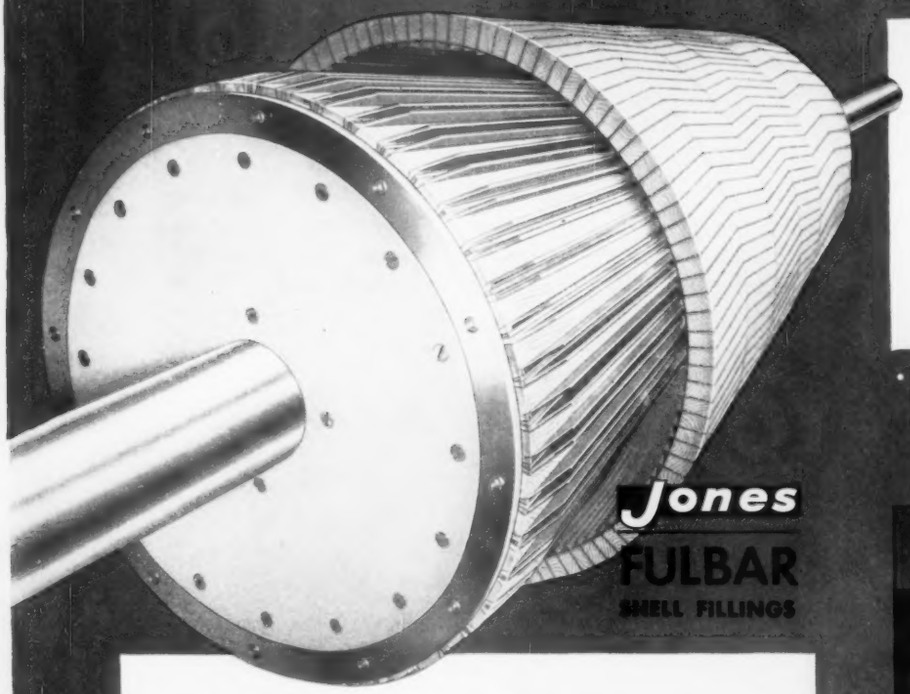
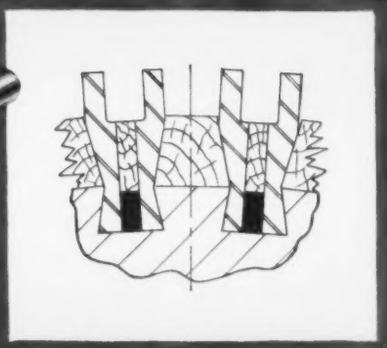
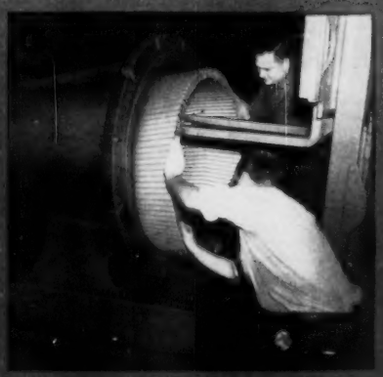




• Inverted wedge-type locking of Adapta-Plug is the same for all bars. Fillings can be changed to meet any condition without changing plug.

• Note how one-piece construction of FULBAR Filling makes for ease of handling — cuts installation time, often by hours.



• And rigid, one-piece FULBAR readily compensates for inequalities in shell body of old or worn Jordans that would make precise fitting of sectional fillings a real problem.

Completely bandless, the Jones Adapta-Plug is the strongest, most adaptable, most economical plug ever made. Exclusive with Jones, this revolutionary advance in plug design holds bars more securely in place, reduces slot wear and corrosion, offers maximum adaptability and is amazingly easy to strip and fill. Available in solid plug — or Mechanite sleeve form for easy changeover on old plugs.

The rigidity and accuracy of Fulbar one-piece shell fillings eliminate keys and wedges, fit shell body of any Jordan, are far simpler to install, easy to grind in — and the patented Nowave pattern offers no sharp ends on bars to form strings or lumps. Over 700 now in use.

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Above right – birthplace of J. R. Geigy, Basle, Switzerland.

200 years Geigy

The history of synthetic dyestuffs is the history of Geigy

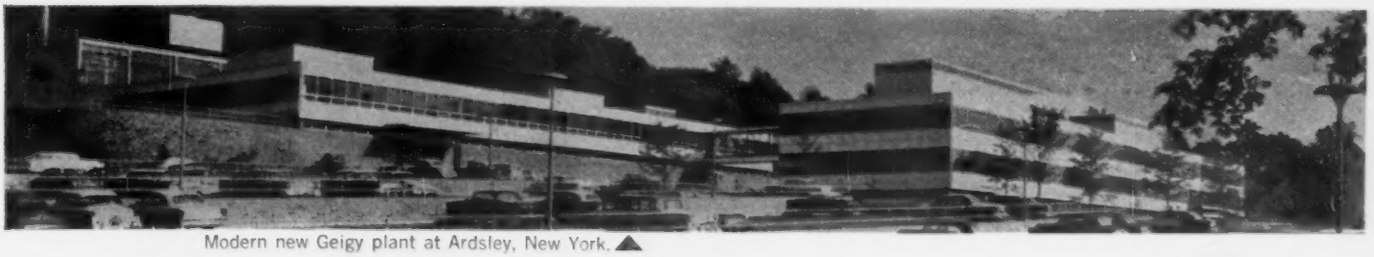
Two centuries ago, in the city of Basle, Switzerland, a native young merchant, Johann Rudolf Geigy, established a business as a dealer in "Materialwaren" . . . drugs, colours, pharmaceutical preparations and spices.

From inception, Geigy was associated with colouring. In 1859, three years after Perkin discovered mauve, Geigy entered the synthetic dyestuff field.

Being 200 years old is one thing but, celebrating 200 years of progress is something else. From a handful of people in 1758, Geigy today employs over 8,000 in over 40 Geigy companies throughout the world.

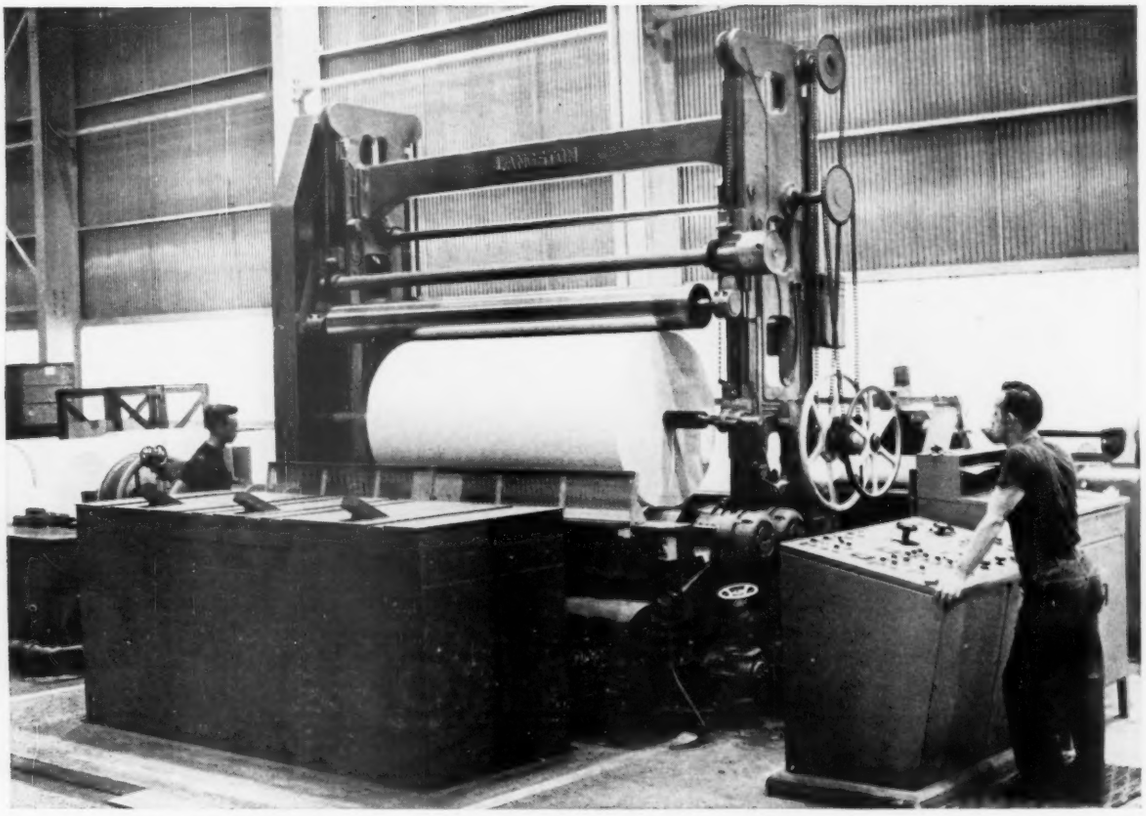
During these two centuries, Geigy has been privileged to supply the paper industry with many revolutionary dyestuffs, some of them history-making firsts that led to new and improved techniques in dyeing. In the years to come we shall continue to strive to make even greater contributions to the fields we serve by furnishing them with products of progress.

GEIGY DYESTUFFS: Division of Geigy Chemical Corporation, Saw Mill River Road, Ardsley, N. Y. Branches in all paper-producing centers.



Modern new Geigy plant at Ardsley, New York. ▲

▼ Geigy headquarters in Basle, Switzerland.



One of the two 104-in. Langston Slitters and Winders in the Glatfelter mill completing rewind. Roll drop table in foreground is up, ready to receive roll when ejected by the winder, and chocks are in raised position to stop the roll. Note console incorporating all major indicators and controls.

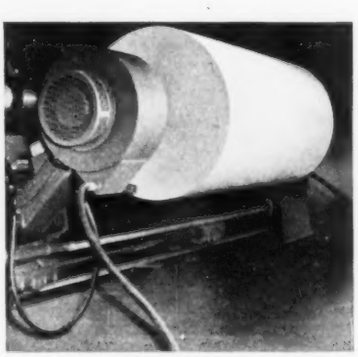
Langston Slitters and Winders turn out tight, even rolls at Glatfelter Mill

Two 104-in. Langston Slitters and Winders have been working in the new mill of P. H. Glatfelter Co., Spring Grove, Pa., for more than a year. They have proved themselves in round the clock production on grades from fine papers to book.

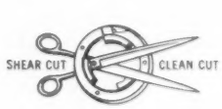
One of the most important features, according to the company, is the constant tension unwind control on the Langston Shaftless Roll Stand, which keeps the tension constant throughout the winding operation. Perfect rolls can be turned out from 9 to 100-lb. stock in roll widths from 7½ to 104 in.

The equipment can be quickly loaded and lined up on the back stand and is designed for easy threadup and gang slitter setting. Hydraulic roll ejectors move the finished rolls quickly from the winding position to the roll drop. Other features include shearcut slitters to eliminate dust; many interlocked controls for extra safety; automatic edge guide control to allow precision trim rewinding of narrow and salvage rolls.

Find out how Langston Slitters and Rewinders can benefit you. Write SAMUEL M. LANGSTON CO., 6th & Jefferson Sts., Camden 4, N.J.

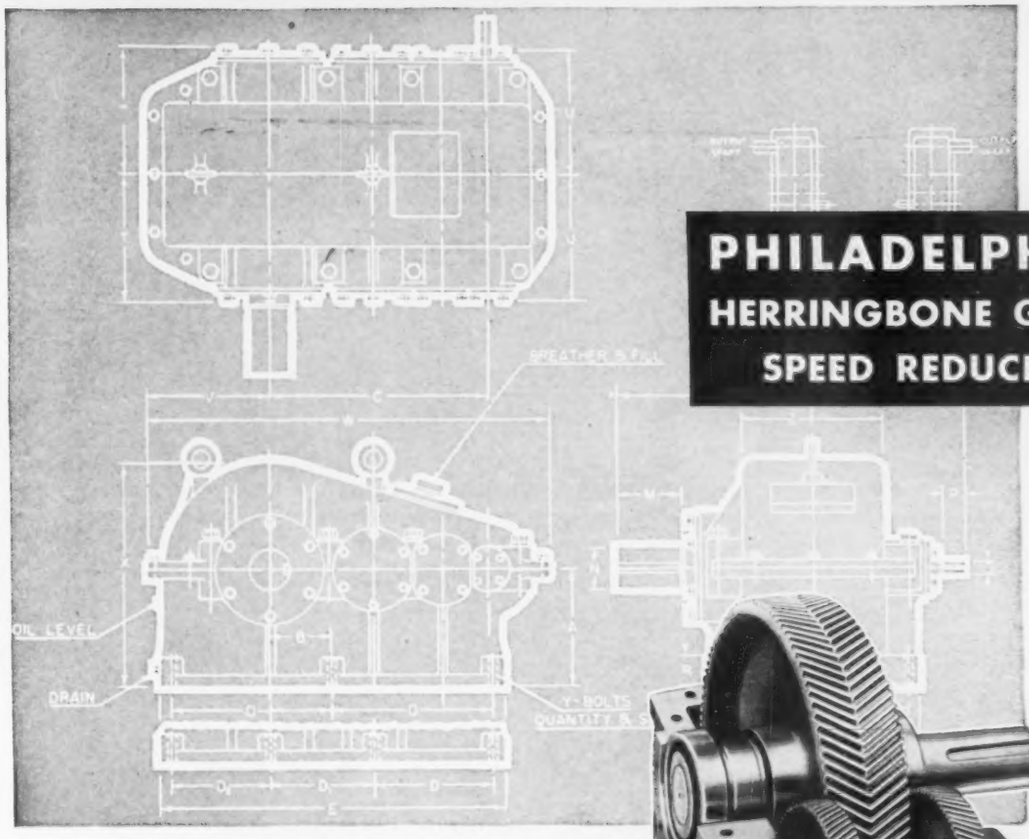


Langston Shaftless Unwind Stand eliminates back-breaking, time-consuming task of hoisting heavy shafts into place. Hydraulically operated arms reach out, pick up the roll, and raise it into running position—a 1-man, pushbutton operation.

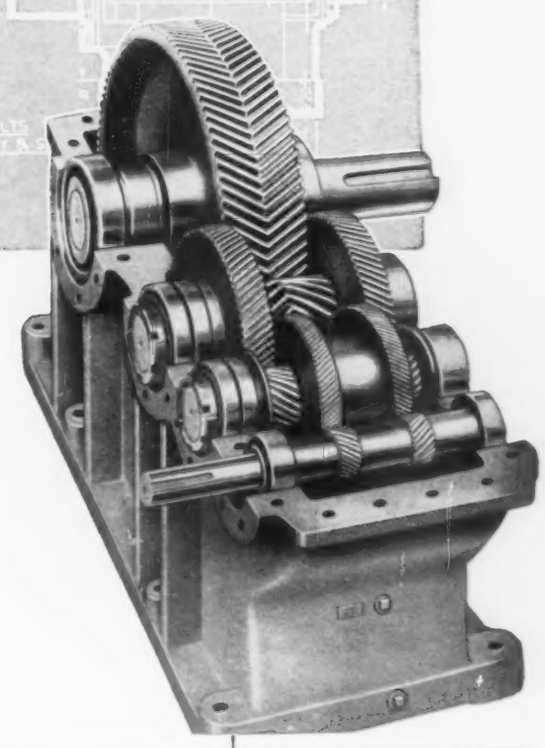


LANGSTON Leadership...by design

Here's the Reducer with a BACKBONE .... and a BACKGROUND



PHILADELPHIA HERRINGBONE GEAR SPEED REDUCER



Yes, Philadelphia Herringbone Reducers can truthfully be said to be *Reducers with a "backbone" and a "background,"* because we have not only been making industrial speed reducers since their inception—but we were one of the pioneers in applying the Sykes continuous tooth type gear to speed reducers.

If you have a problem involving high horsepower speed reduction with heavy shock loads, Philadelphia Herringbone Reducers are the answer. These quality-built units are available in Single, Double and Triple Reduction Types, offering a wide selection of capacities and reduction ratios. The continuous tooth type herringbone gears assure evenly distributed pressure over each tooth from the top to the working depth line—which means exceptionally long life, minimum vibration, quiet operation and maximum transmission of power . . . Thousands of Philadelphia Herringbone Reducers are in daily use, in most every line of industry. Be convinced, send for Catalog H-55.

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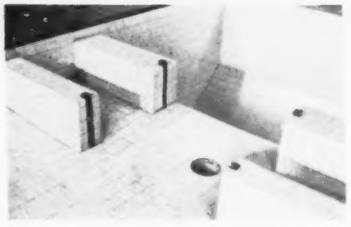

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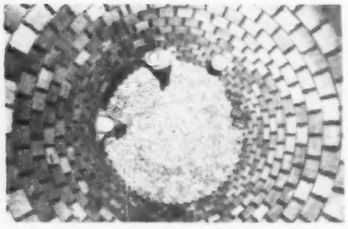
Specially developed for low-temperature, mild-service conditions where clearances are small and maximum capacity must be retained. Neat, easy to keep clean. Special Swedish tile for heavy-duty service. For couch and wire pits, beaters, stock chests, dye becks, etc.



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SEMCO and SEMAC Brick are used in vessels subject to severe corrosive effects. High chemical resistance plus superior thermal spall resistance. For digesters, acid accumulators, acid tanks, chlorine dioxide reactors, bleachers, blow pits and primary coolers. Carbon Brick, Fire Brick and Insulating Brick also used as required.

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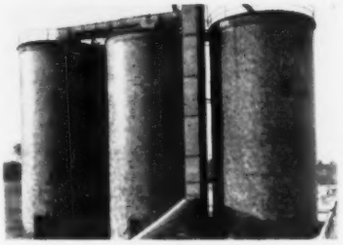
Stebbins storage tanks are, in effect, reinforced concrete faced inside and out with vitrified tile. Wide variety of contours and sizes. Walls are designed to carry the fully hydrostatic head in accordance with accepted concrete design. High-density storage tanks, machine chests, clay slurry chests, etc.



TILE SILOS

Silos for storage of dry solids are built of SEMTILE or SEMBLOK, or combinations of the two, depending upon the size, location and physical characteristics of the material. Material-handling equipment may be carried on the reinforced tile structure.

MEMBRANE LININGS

Stebbins installs membrane linings, protected by tile or brick, to meet special chemical conditions beyond the protective limits of the brick or tile itself. Complete shop facilities and field crews are available for application of a complete range of sheet and liquid membrane materials.

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CANADIAN STEBBINS ENGR. & MFG. CO., LTD. — TOWN OF MOUNT ROYAL, MONTREAL 9, CANADA

"MORE EFFICIENT OPERATION . . . LOW COST INSTALLATION . . . LESS MAINTENANCE . . ."

States Engineering Dept., R. Hoe & Co., Inc., New York

Pictured above is a huge new multi-color Rotagravure Printing Press built by R. Hoe and Company on which WICHITA Clutches are used. Previously, electro-magnetic clutches were used requiring explosive-proof housings, special wiring, etc.

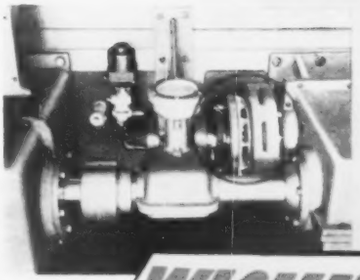
When clutch changes were planned by Hoe Engineers, WICHITA was specified, because of their "MORE EFFICIENT OPERATION, LOW COST INSTALLATION, AND LESS MAINTENANCE." This is one more example of how and why WICHITA Clutches are being specified and used on modern equipment.

For Right: This Wichita Clutch is mounted on a vertical shaft in the drive for the pulling rollers at the folder on the Hoe Press.

Near Right: Here a Wichita Clutch is shown on the steam drum drive of the Hoe Press.

For starting, stopping, or controlling tension, check with your nearest WICHITA engineer!

Brehm-Lahner, Inc., Detroit, Mich.
L. H. Fremont, Cincinnati, Ohio
W. G. Kerr Company, Pittsburgh, Pa.
Smith-Keser & Co., Avon, Conn.
Philadelphia 44, Pa., & New York, N. Y.
Frank W. Yarline Co., Chicago, Ill.
Larry W. McDowell, Long Beach, Calif.
Robert R. King Co., Cleveland, Ohio
Andrew T. Lobel, Denver, Colorado
W. G. Ballantyne Co., Portland, Ore.
Allied Transmission Equipment Co., Kansas City 8, Missouri
Norman Williams, Houston, Texas
Donald E. Harman, Dallas, Texas
C. Arthur Weaver, Richmond, Virginia
Malcolm S. Cone, Memphis, Tennessee
Dominion Power Press Equipment Ltd., Burlington, Ontario, Canada
R. E. Kunz Co., Seattle, Wash.
Bates Sales Co., St. Louis, Mo.



WICHITA Clutch COMPANY, INC.
WICHITA FALLS, TEXAS, U.S.A.

A FEW INTERESTING OBSERVATIONS CONCERNING SPICES, FOOD AND ALBERTA HI-BRITE BLEACHED KRAFT PULP (MOSTLY ALBERTA HI-BRITE BLEACHED KRAFT PULP)

Food can be as flat as a Sahara landscape . . . or as exciting as a day in Spring. The vital ingredient that makes the difference is *spice*. No pound cake is worth mentioning without *ground mace*, curried dishes owe their savor to *turmeric*, poultry dressing is nothing without *thyme*. The spice of your choice will produce the type of flavor, aroma and piquancy you prefer. In very much the same manner, Alberta Hi-Brite, when added to furnish, is the vital ingredient that determines the characteristics of excellence you desire.

Alberta Hi-Brite is the one bleached kraft pulp that gives your paper extra-high folding and tensile strength . . . plus formation and printability, qualities usually associated only with low-strength pulps. It lends opacity and cleanliness . . . makes your pulp white enough, bright enough for producing even the finest writing papers, thanks to a new *exclusive* multi-stage chlorine dioxide bleaching process. And, Alberta Hi-Brite has the unique ability to develop good characteristics *whether your product calls for light or extensive refining.*

To accommodate production facilities, the town of Hinton in Alberta, Canada expanded enormously. Here, Alberta Hi-Brite is produced at a capacity rate of 400 tons per day. Four million acres of adjacent forest reserves assure the mill a perpetual yield of spruce and lodgepole pine, the slow-growing softwoods famous for their longer, thinner fibres and superb pulping qualities.

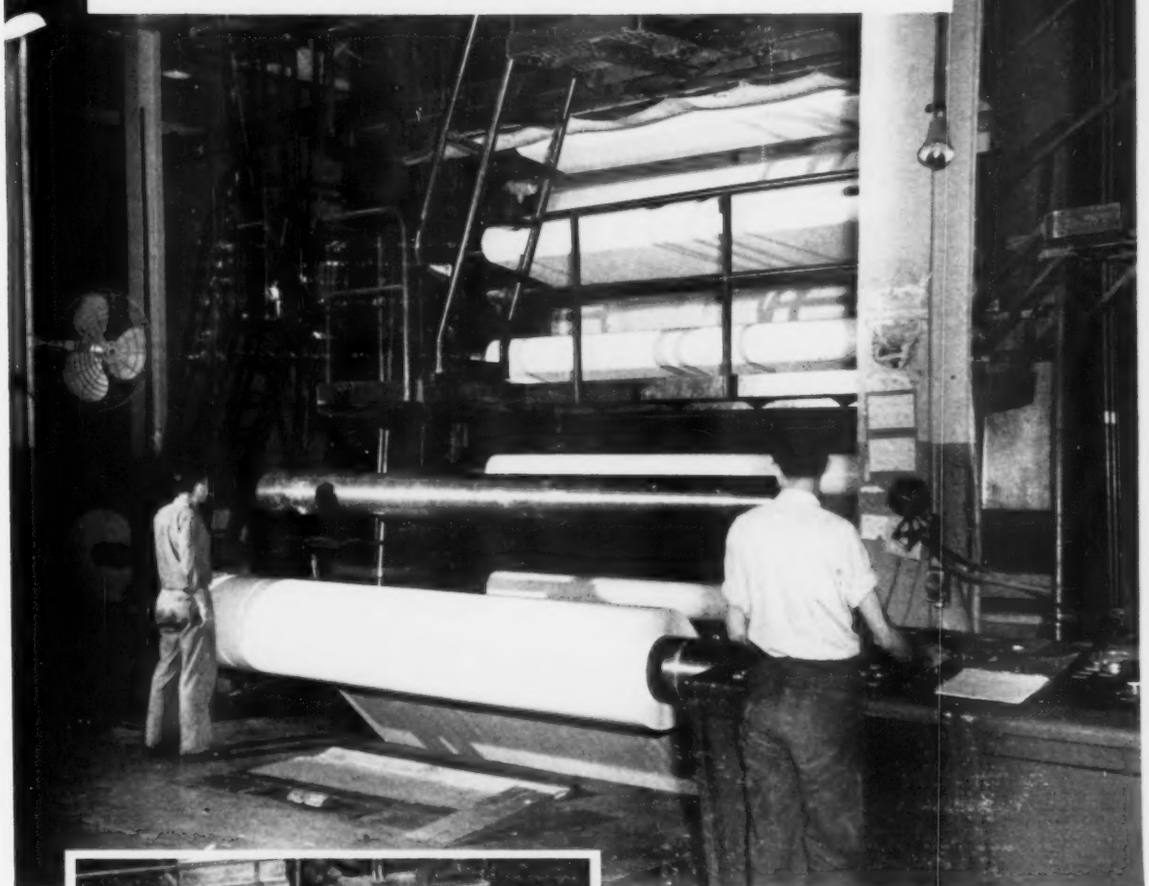
For full information on how Alberta Hi-Brite can improve the quality of your product, write: Dept. PP-358, St. Regis Paper Company, 150 East 42nd Street, New York 17, New York.

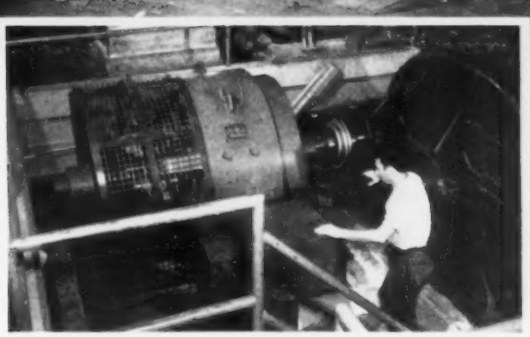
KRAFT DIVISION

St.Regis PAPER COMPANY

Pulp Sales Offices: NEW YORK • CHICAGO • SAN FRANCISCO • TORONTO • MONTREAL

Reliance Drive at Mead





Mead Corporation supercalender located in their Kingsport, Tennessee plant. Inset shows the 500 hp. main drive motor, one of the three motors used in Reliance Supercalender Drives.

A Reliance Supercalender Drive keeps downtime for threading to a minimum for Mead by maintaining stable threading speeds. Threading-up is a fast and safe operation because the Reliance Drive accurately holds the 40 fpm. threading speed.

This accurate speed control is not limited to low speeds. The Reliance Supercalender Drive regulates speeds exactly through the entire speed range of the machine, all the way up to the 2000 fpm. top speed.

Other features of Reliance Supercalender Drives include break-away torque for smooth starts, precise tension control for good paper quality and good roll taper, wind and unwind from top or bottom of roll. These and many other features are explained in the Reliance Supercalender Drive Bulletin L-2507. Write for your copy today. L-1875

RELIANCE ELECTRIC AND ENGINEERING CO.

Dept. 183A, Cleveland 17, Ohio
Canadian Division: Toronto, Ontario
Sales Offices and Distributors in principal cities

Why Link-Belt C class chains last longer in pulpwood handling

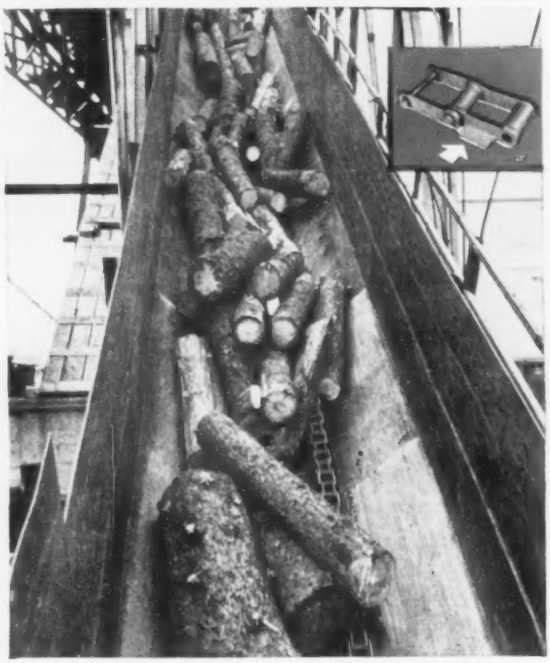
K-12 ATTACHMENT cushions C-132 chain on this horizontal conveyor from the constant pounding of hardwood logs being dropped by crane.

C-132 chain with K-12 attachment withstands heavy hardwood impact

Broad sliding surface of K-12 attachment protects Link-Belt C-132 chain against the terrific impact of heavy logs falling on this horizontal conveyor. K-12 attachment features sturdy wear shoe which absorbs shock and transfers it to track, minimizing stress on chain joints . . . adds greatly to conveyor life.

Popular for both conveying and elevating, C-132 chain combines cast center links with steel sidebars connected by steel pins . . . offers high strength and ample joint bearing area. Broad tops and bottoms provide long sliding surfaces for drag conveyors.

Many other center link and sidebar attachments are available to suit a variety of conveyor applications.



K-9 ATTACHMENT on this C-132 chain provides broad sliding surface—greatly increases wear life of chain.

C class chain available in Promal for extreme loads and abrasive wear

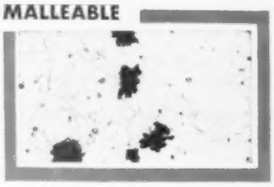
Specially heat-treated malleable iron provides extra wear resistance

The grueling day-in, day-out punishment of pulpwood conveying requires the added strength and greater wear resistance offered by Link-Belt's "file-hard" Promal C class chain. It's specifically designed to stand up under impact and abrasive abuse.

This rugged C class chain consists of Promal cast center links and steel sidebars connected by steel pins which are locked against rotation. The "file-hard" surface of the center links helps minimize conveyor shutdowns, replacement and maintenance costs.

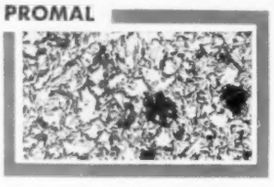
Promal is more than a partially annealed or surface hardened malleable iron. Developed by Link-Belt, this specially heat-treated malleable iron is actually transformed into a metal of radically different physical properties. Promal, because of uniform micro-structure throughout its whole section, provides greater ultimate strength, higher yield point, exceptional fatigue resistance and a remarkable ability to withstand abrasion.

MALLEABLE



White areas in malleable iron microphoto represent "free-iron," black is soft carbon nodules.

PROMAL



Dark areas in Promal structure show stronger, stiffer reinforcing material which strengthens metal.

These C class combination chains give efficient elevating service

C class combination chain is one of the most popular for pulpwood log elevator service. The cast center link and steel sidebar combination forms a strong, rugged, yet inexpensive elevating medium. Generous pin bearing surfaces within the barrels give good wearing life and durability. Attachments are available for both malleable iron or Promal center links and steel sidebars.

HEADQUARTERS for Link-Belt products is your nearby Link-Belt factory branch store or authorized stock-carrying distributor. Refer to the yellow pages of your local phone directory.

LINK-BELT

CHAINS AND SPROCKETS

LINK-BELT COMPANY: Executive Offices, Prudential Plaza, Chicago 1. To Serve Industry There Are Link-Belt Plants, Sales Offices, Stock Carrying Factory Branch Stores and Distributors in All Principal Cities. Export Office, New York 7; Canada, Scarboro (Toronto 13); Australia, Marrickville, N.S.W.; South Africa, Springs. Representatives Throughout the World. 14,755

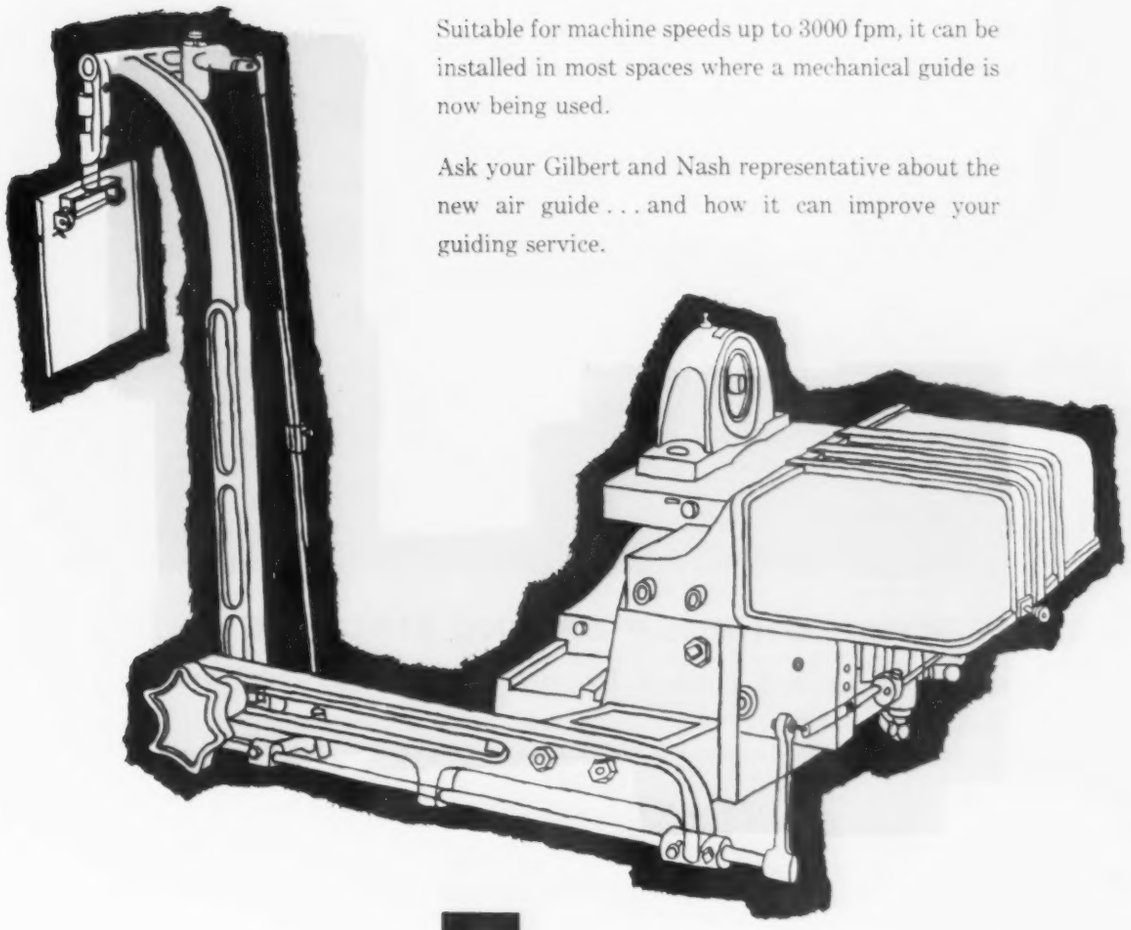
NEW AIR GUIDE FROM GILBERT AND NASH

Here's a new guiding service from Gilbert and Nash —an efficient economical air-operated guide. Simple, too, with a minimum of mechanical moving parts.

The new Gilbert and Nash air guide has a constant rate of correction, regardless of the machine speed. And when correction is needed, there's no lag! The air guide reacts instantaneously!

Suitable for machine speeds up to 3000 fpm, it can be installed in most spaces where a mechanical guide is now being used.

Ask your Gilbert and Nash representative about the new air guide . . . and how it can improve your guiding service.



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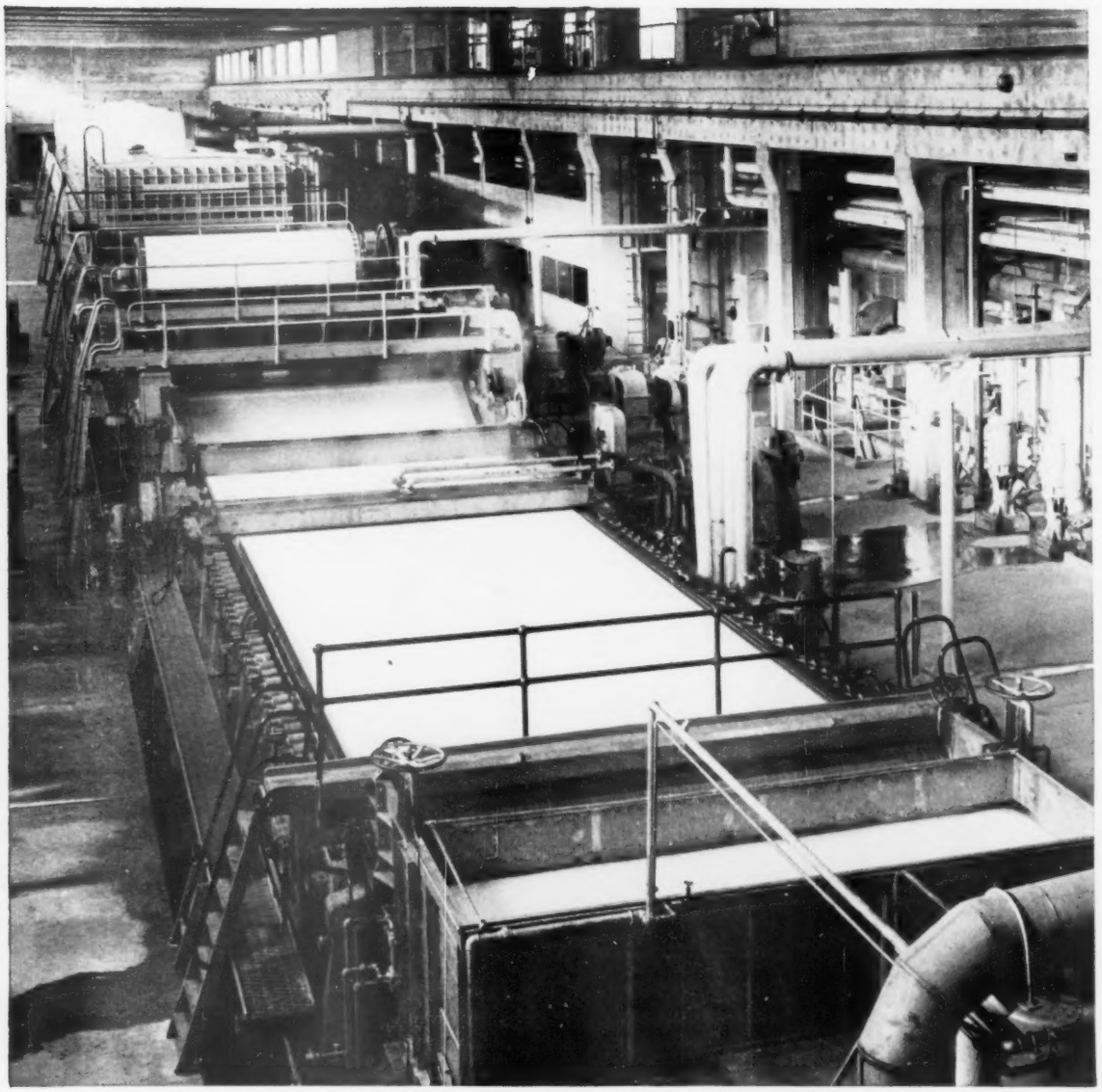

The **DOMINION PULP DRYING MACHINE** at
British Columbia Forest Products Limited, Crofton Mill

178-inch wire width machine equipped with
Minton Vacuum Dryer — Rated capacity: 525 tons per day

PAPER DIVISION
DOMINION ENGINEERING
COMPANY LIMITED
MONTREAL • TORONTO • WINNIPEG • VANCOUVER

Mr. Brian Shera, left, manager of Technical Service, Pennsalt of Washington Division, and Mr. Walter E. Erickson, bleaching plant operator, examine pulp samples from bleached pulp decker at Scott Paper Company, Everett, Washington.

Why PENNSALT is a major supplier of chemicals to the Pulp and Paper Industries of the Pacific Northwest

SODIUM CHLORATE
•
CHLORINE
•
CAUSTIC SODA
•
ANHYDROUS AMMONIA

With two plants in the Pacific Northwest, Pennsalt provides quality controlled chemicals to the pulp and paper industries in the West, Canada and Alaska. These nearby plants mean economies in transportation, dependable supply, prompt delivery and reduction of inventory requirements. A highly trained and experienced staff of technical engineers can be put on your staff "but not on your payroll." Write or telephone for free technical bulletins.

PENNSALT OF WASHINGTON DIVISION

PENNSALT CHEMICALS CORPORATION

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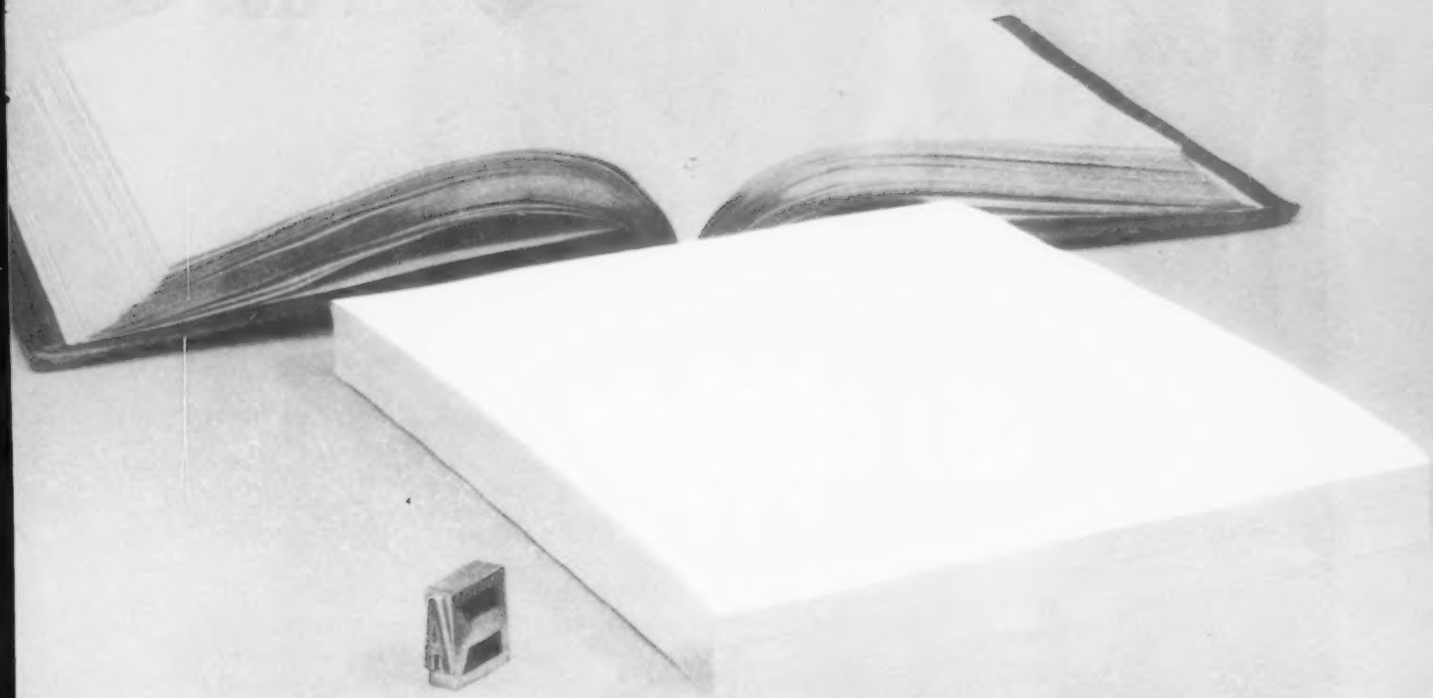
FINEST PRINTING PAPERS...

begin with Glidden Zopaque® Titanium Dioxide



The printing papers that give you the sharpest, clearest reproduction and minimum show-through, require a white pigment that imparts highest opacity and maximum whiteness. Papers with the finest reproductive qualities are those produced with Glidden Zopaque Titanium Dioxide — the whitest white pigment available.

Zopaque consists of finer, more uniform particles that disperse more easily, more readily to help assure you of the highest quality paper production possible. Write now for information on the grades of Zopaque specially developed for coatings and beater addition.

Glidden

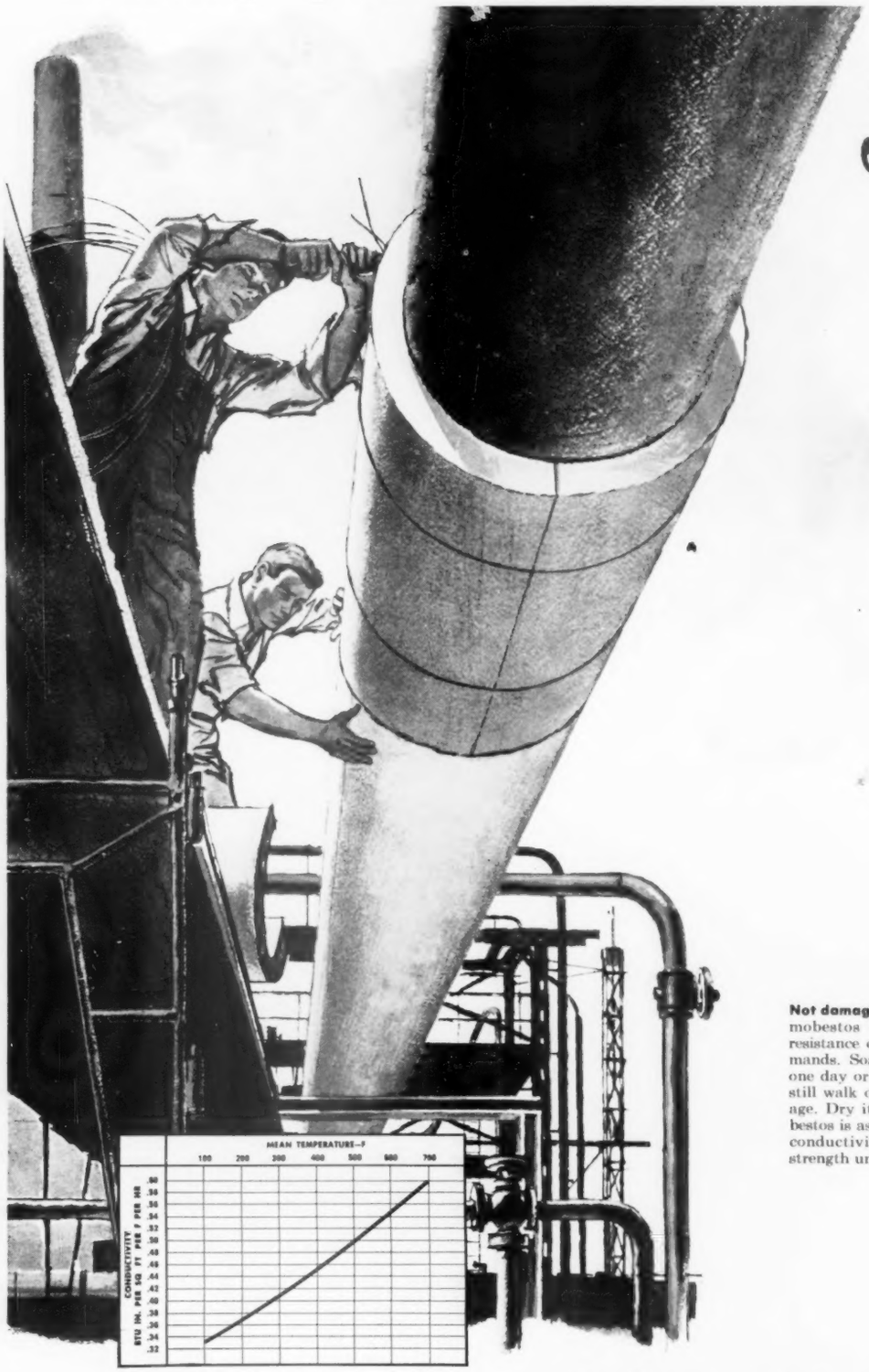
THE GLIDDEN COMPANY

Chemicals-Pigments-Metals Division

Baltimore, Md. • Collinsville, Ill. • Hammond, Ind. • Scranton, Pa.

In developing THERMOBESTOS Insulation

J-M at



Low Conductivity. The low thermal conductivity of Thermobestos is best demonstrated in actual service where it makes possible accurate, uniform temperature control, helps reduce fuel costs and contributes materially to operating efficiency.

Not damaged by water. Thermobestos has the moisture resistance outdoor service demands. Soak it in water for one day or 365—and you can still walk on it without damage. Dry it out and Thermobestos is as good as new, with conductivity and structural strength unimpaired.

Johns-Manville

for outdoor process industry applications

research scientists didn't stop top insulating effectiveness...

They added the three physical properties you most wanted— HIGH STRENGTH—LIGHT WEIGHT —MOISTURE RESISTANCE!

Thermobestos® offers the lowest k factor of all insulations in general use throughout the process industries. For maximum heat control on outdoor piping and equipment operating at temperatures to 1200F it just can't be beat!

Yet top insulating effectiveness is only one reason why more and more engineers are specifying Thermobestos for refineries, chemical plants, and wherever hot outdoor vessels and piping must be insulated. For Thermobestos also offers a threefold bonus . . .

. . . Three outstanding physical properties

Thermobestos is 1) strong and rigid. Its hard composition resists crushing and easily withstands unusual service abuse. Yet it is 2) lightweight for easy handling and fast application. And it is 3) highly moisture resistant, remains undamaged even by prolonged wetting.

Quickly, easily applied

Thermobestos is made from hydrous calcium silicate . . . molded to size for proper fit. Its high strength makes it particularly adaptable for time-saving shop prefabrication of fittings and bends.

Furnished in large sections, Thermobestos is easy to apply. It reduces the number of joints. In pipe insulation form, it comes in a complete selection of sizes up to 30" O. D. Also available in 6" x 36" and 12" x 36" blocks in a full range of thicknesses.

For further information write for your free copy of the 12-page Thermobestos booklet, IN-169A. Address Johns-Manville, Box 14, New York 16, N. Y. In Canada, Port Credit, Ontario.

INSULATIONS FOR LASTING THERMAL EFFICIENCY
MATERIALS · ENGINEERING · APPLICATION

JOHNS-MANVILLE JM PRODUCTS

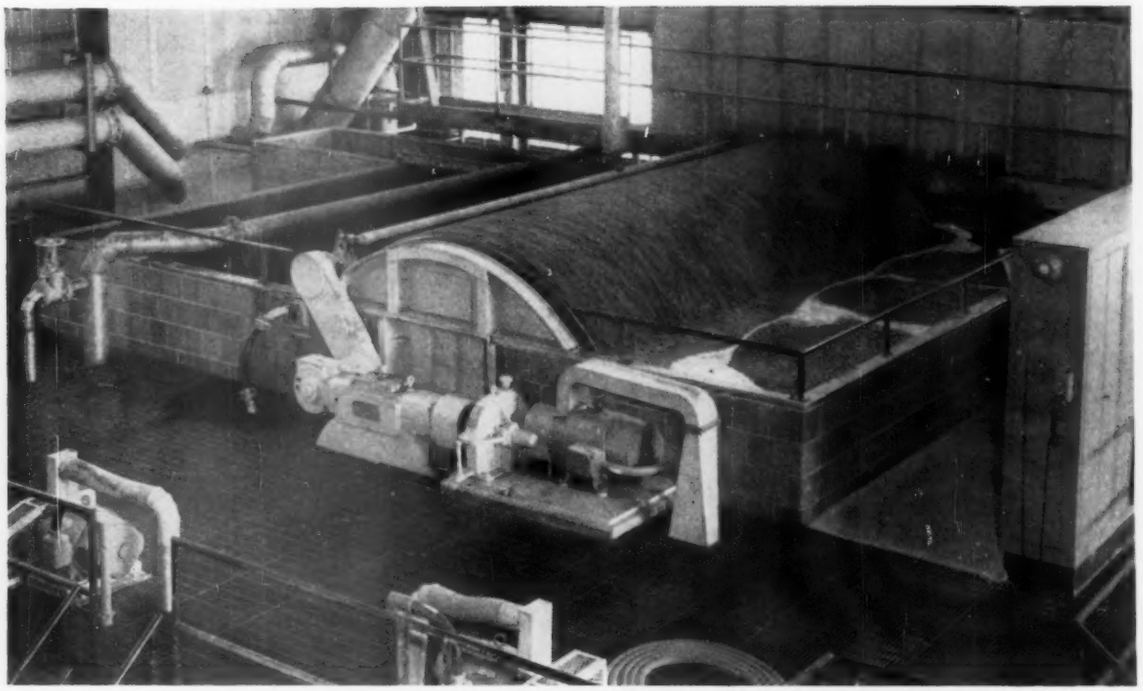


Photo courtesy of St. Regis Paper Co., Jacksonville, Florida. 11'-6" x 20' Valveless Decker Saveall operating with new "Seminole Chief" Kraft Board Machine.

IMPCO VALVELESS DECKER-SAVEALLS

There are more than 235 Impco Valveless installations. Many of these fall in the Decker-Saveall category. Several handle the entire paper machine production, using white water as dilution. Some act as broke thickeners, again using white water as dilution. Others are in a variety of saveall applications. In all cases the Impco Valveless delivers clarified effluent suitable for re-use, with pulp discharged at a controllable consistency for proper stock preparation. May we show you how this versatile machine can reduce your costs and simplify your operating procedure?

IMPCO®

IMPROVED MACHINERY INC.
NASHUA, NEW HAMPSHIRE

In Canada, Sherbrooke Machineries Limited, Sherbrooke, Quebec

Form 2

INTER-OFFICE MEMO
WALWORTH COMPANY

TO ALL UNIT MANAGERS FROM F. M. JACKSON

ATTENTION DATE March 1, 1958

SUBJECT 757F PULP STOCK VALVES REFER TO YOUR LETTER DATED

As an item which may be of interest to you, please refer to Circular Letter 164 dated October 22, 1954, in which reference is made to an 8" Pulp Stock Valve installed at the [redacted] Company. At the time this circular letter was issued, the valve in question was in service slightly more than 8 months. We are pleased to advise that this same valve is still in service in its original location and is still in satisfactory condition.

The valve which was replaced by ours was manufactured by [redacted] Company and had given a maximum life of 9 weeks. It is interesting to note that our valve in the same location has performed satisfactorily for approximately 42 months with no sign of failure to date.

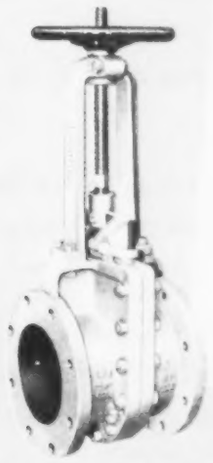
For your further information, Walworth Pulp Stock Valves have now been installed in approximately 55 different mills and to the best of our knowledge all of these valves are operating satisfactorily.

F. M. Jackson
Vice President

FMJ:kg

DECREASE INTERCOMPANY CORRESPONDENCE. WRITE ONLY NECESSARY LETTERS. BE BRIEF BUT DEFINITE.

Other sizes available from 4" to 24"



For prompt help with any pulp or paper mill valve problem, see your Walworth Distributor or write Walworth direct.

WALWORTH

750 THIRD AVENUE, NEW YORK 17, N. Y.

DISTRIBUTORS IN PRINCIPAL CENTERS THROUGHOUT THE WORLD

WALWORTH SUBSIDIARIES: ALLOY STEEL PRODUCTS CO. • CONOFLOW CORPORATION • GROVE VALVE AND REGULATOR CO. SOUTHWEST FABRICATING & WELDING CO., INC. • M&H VALVE & FITTINGS CO. • WALWORTH COMPANY OF CANADA, LTD.

The prominence DeZurik Vee Port Control Valves have attained in the pulp and paper industry was not by accident . . . or default!

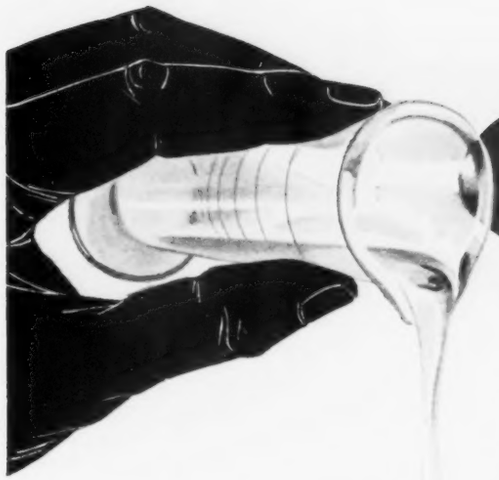
They have achieved their excellent reputation by producing results . . . the results engineers have wanted, and sought, for years.

You can have the same excellent results in your mill! You can have *constant* flow . . . without variation from packed stock! You can have instant response . . . with freedom from backlash! You can have extreme sensitivity. And you can have versatility—flow characteristics are easily and instantly changed by replacing a cam in the positioner.

These longer-lasting, accurate DeZurik Control Valves can provide you with precise control . . . trouble-free control . . . on all stock lines.

Why not get more information on DeZurik Control Valves. We'll be happy to recommend the proper installation for your control problem.

DeZURIK
CORPORATION
SARTELL, MINNESOTA



NOPCO

THE RIGHT WAX SIZE FOR YOU

No matter what type of paper, paperboard or fiberboard you produce, sizing problems can be eliminated with some wax size made by Nopco. Twenty-one different formulations are available—developed to give your product any combination of properties desired.

Nopco wax sizes assure positive wax retention in the fibers . . . thorough and even wax distribution through the sheet . . . high efficiency at low cost.

And remember, back of all Nopco wax sizes are the skills and resources of Nopco chemists and technicians. They stand ready and anxious to give close attention to all requests and inquiries, ready and anxious to assist you with laboratory data and recommendations bearing on your specific requirements.

Ask our nearest representative for full details on Nopco wax sizes and services or write to us: Nopco Chemical Company, Harrison, N.J., or Richmond, Calif.

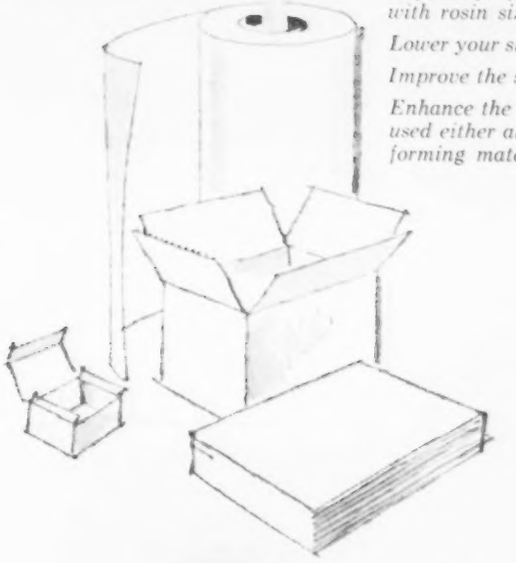
Depend on Nopco Wax Sizes to do all these things:

Improve properties which are difficult or impossible to obtain with rosin sizes

Lower your sizing costs by replacing 30% to 50% of rosin size

Improve the sizing of fortified rosin sizes

Enhance the surface qualities of your paper and board, when used either alone or in conjunction with starch or other film-forming materials



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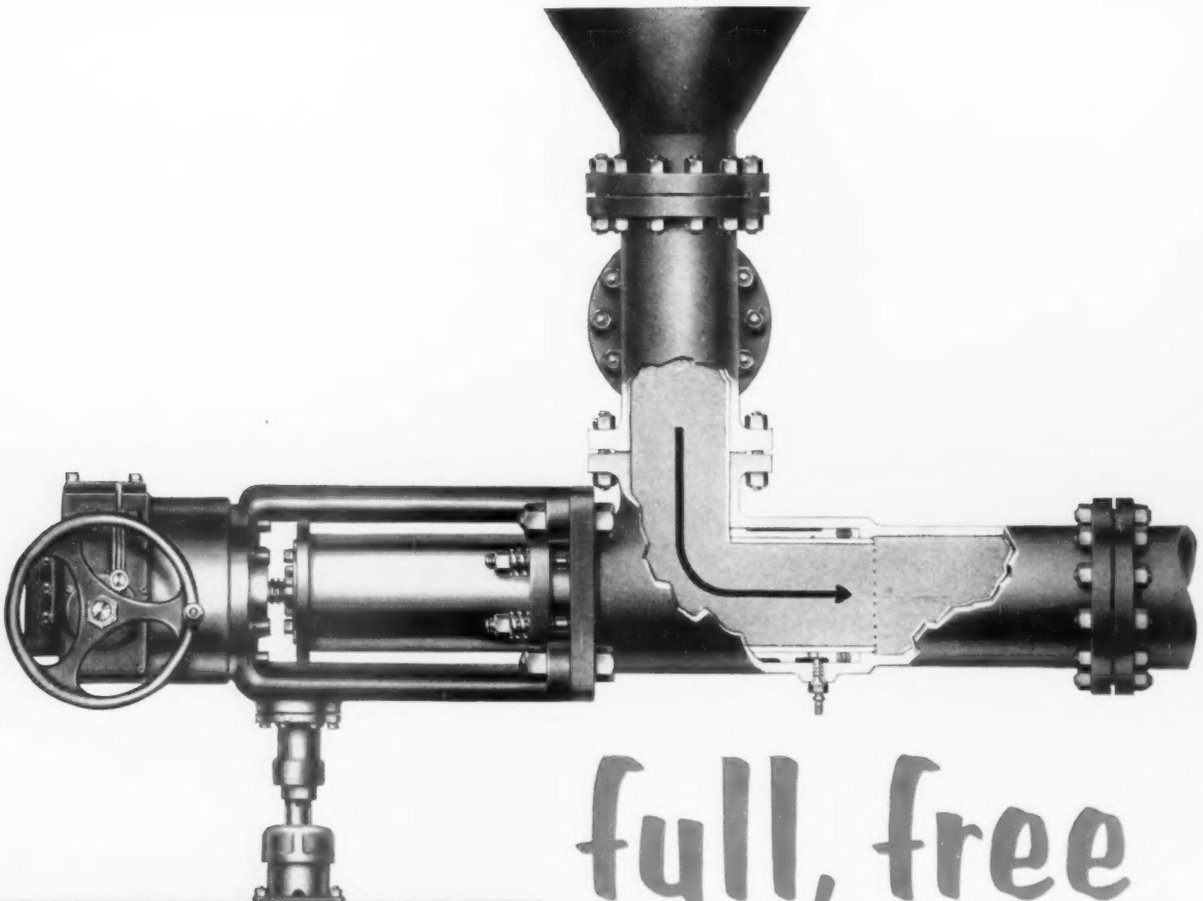
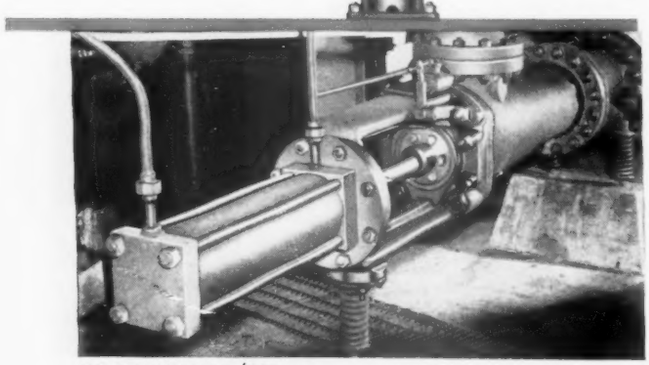
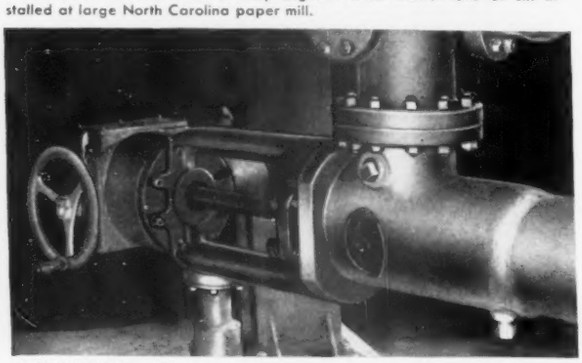


full, free digester discharge



HYDRAULIC-OPERATED Yarway Digester Blow Valve—one of six installed at large North Carolina paper mill.



MOTOR-OPERATED Yarway Digester Blow Valve—one of eight installed at large Canadian paper mill.

Digesters blow fast and clean with YARWAY Seatless Blow Valves.

The hollow sliding plunger has no pockets where wood chips or tramp materials can hang up.

All Yarway Digester Valves have full pipe area, permitting fast discharge with minimum pressure drop. Comparisons show more discharge area . . . reducing blowing time, increasing number of cooks.

Scores of pulp mills report *lower operating costs* and *increased production* due to YARWAY Digester Blow Valves. One large mill found *savings in operation and maintenance the first year more than paid the cost of their 4 new Digester Valves!*

YARWAY Seatless Digester Valves can be furnished either with electric motor or hydraulic cylinder units. Both are remote controlled. Bulletin B-441 gives the whole story. Write for it.

YARNALL-WARING COMPANY
103 Mermaid Avenue, Philadelphia 19, Pa.
BRANCH OFFICES IN PRINCIPAL CITIES

YARWAY . . . DIGESTER BLOW VALVES

A PURE BLUE FOR FINE PAPERS

FAST BOND BLUE GDX

cover

index

ledger

bond

nondusting acid dye for beater application

Added dry to the beater, Fast Bond Blue GDX produces clear, bright shades of lightfast blue in cover, bond, ledger and index papers. In combination with Brilliant Pure Yellow 6GS Extra Conc. it produces very bright greens.

Fast Bond Blue GDX has the unique property of yielding shades of minimum two-sidedness and insensitivity to dryer heat in unfilled papers. However, in loaded papers run at moderate speeds, it yields deeper shades on the wire side than on the felt side.

For further information about Fast Bond Blue GDX, or assistance with any paper dyeing problem, please contact our Technical Service Department or nearest sales office.

From Research to Reality

GENERAL DYESTUFF COMPANY

A SALES DIVISION OF

GENERAL ANILINE & FILM CORPORATION

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BOSTON • CHARLOTTE • CHATTANOOGA • CHICAGO • LOS ANGELES • NEW YORK • PHILADELPHIA • PORTLAND, ORE. • PROVIDENCE • SAN FRANCISCO • IN CANADA: CHEMICAL DEVELOPMENTS OF CANADA, LTD., MONTREAL

Here's why WEST END can answer any inquiry immediately!

When you phone an order or request information, the Sales Office Manager in Oakland with whom you speak can contact the plant at WEST END immediately. He talks by private wire teletype with the Production Manager on product availability . . . Shipping Superintendent on packaging, transport facilities, dates and car numbers . . . Technical Director on detailed specifications . . . Plant Manager on the development of products to meet new applications or specifications.

An answer or firm commitment is given immediately. It is relayed to you often while you are still on the phone.

WEST END's Sales Office Manager sales representatives and plant executives work together as a team manning a system that is, in our opinion, uniquely outstanding in the chemical industry. Their confidence in the efficiency of this system is reflected in the enthusiastic, helpful and friendly manner in which they promptly serve you . . . our customers.

WEST END CHEMICAL COMPANY
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SODA ASH
SALT CAKE
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Scriptite 40 is a *new* concept in urea formaldehyde resins for paper finishing. Because this water-soluble resin has been made more cationic, it is strongly attracted to the cellulose, assuring high efficiency in application. Scriptite 40 provides faster cure, and paper products maintain a higher wet strength value with less resin add-on than is usually required.

For laboratory sample of Scriptite 40 and technical bulletin, write to Monsanto Chemical Company, Plastics Division, Room 393, Springfield 2, Mass.

The Monsanto Line of Paper Resins also includes:

SCRIPTITE 54 . . . *for outstanding water resistance and both wet and dry rub resistance.*

SCRIPTITE 52 . . . *in combination with formaldehyde to give water resistance to folding boxboard and to jute liner.*

SCRIPTITE 50 . . . *for unsurpassed printability and improved surface characteristics on boxboard.*

SCRIPTITE 33 . . . *a melamine wet-strength resin.*

SCRIPTITE 45 . . . *a new thermosetting resin for the stabilization of paper.*

LYTRON . . . *water dispersed resin polymers for coatings.*

*SCRIPTITE REG. U.S. PAT. OFF.

Monsanto

AMERICAN (DISC-TYPE) SAVEALL

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Handles 1570 GPM of White Water and Recovers 80% of the Titanium Dioxide

This 9 ft. dia. by 12 disc American Saveall was recently installed at Fraser Paper, Limited, Madawaska, Maine, to obtain improved recovery of pulp fibers and fillers from the white water from the No. 6 paper machine, currently producing 22½ pound catalog paper. The latest of the five Savealls installed at Fraser, this unit requires only 12 ft. by 23 ft. of floor space. Operating at a recovery efficiency of 90%, this Saveall recovers 11 TPD of valuable fiber and 80% of the Titanium Dioxide.

American (Disc-Type) Savealls are available in two diameters—7 and 9 feet. From 2 to 8 discs are available in the 7 ft. dia. units and from 4 to 12 discs in the 9 ft. dia. units.

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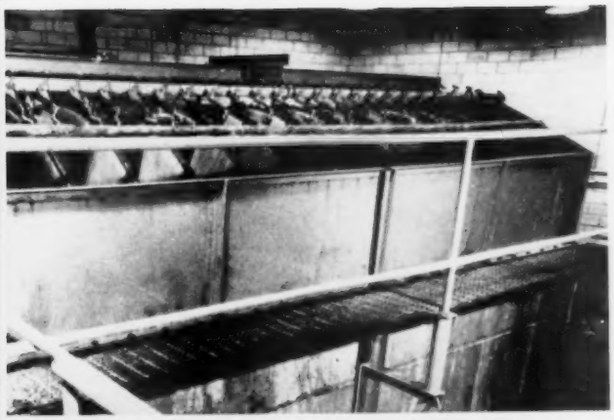
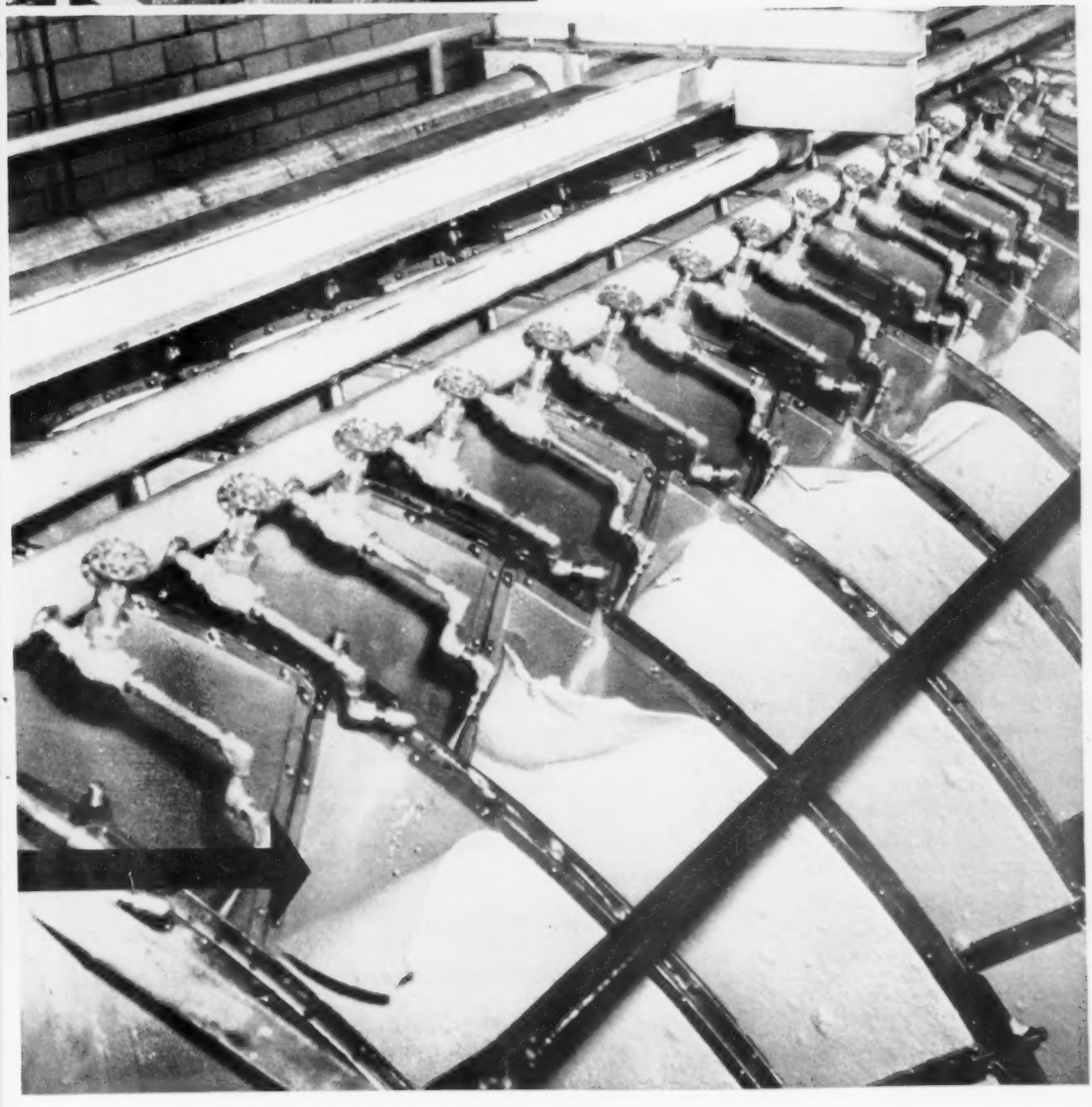


The No. 5 Saveall, 9 ft. dia. x 12 discs, at the Madawaska, Maine mill of Fraser Paper, Limited.



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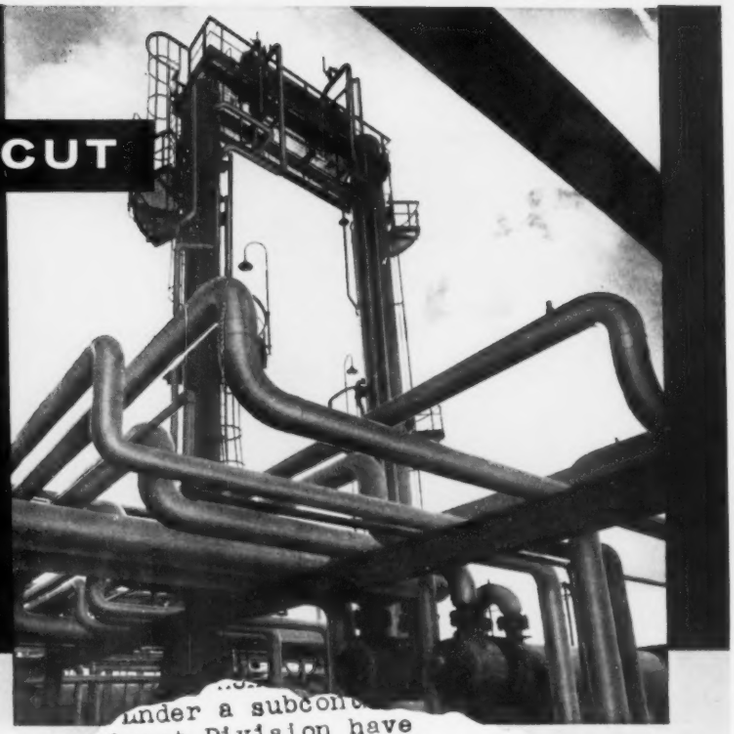

...under a subcon...

and I would like to say the West Coast Division have on this job complied fully with the high standards of workmanship for which Midwest is known.

Throughout this entire project not once was a cut necessary to correct any piece of fabrication, and I might add in several instances close tolerances had to be met.

The above was not written on an impulse but as construction superintendent, this means but one thing: fast and low cost erection. Would appreciate your thanking Midwest personally for ...om a construction

Excerpt from letter by:
HOLMES & NARVER • Engineers-Constructors
828 South Figueroa St. • Los Angeles 17

Note particularly the words "*fast and low cost erection*" in the above letter. They characterize Midwest Shop-Fabricated Piping . . . whether for refinery, power plant or industrial installations. In this instance they were written by A. H. Chamberlain, construction superintendent, upon completing the installation of a Houdriformer Unit at the U.S. Oil & Refining Co., Tacoma, Washington.

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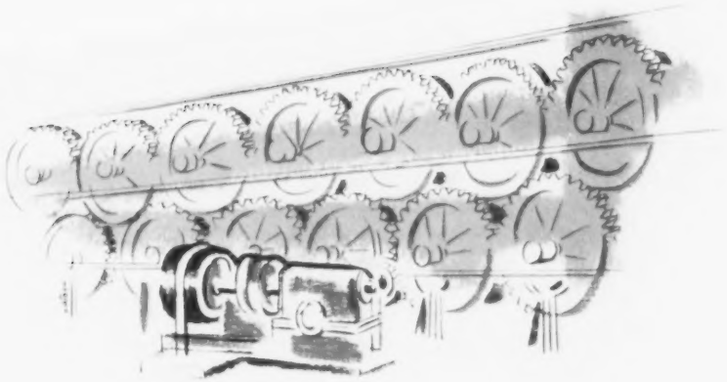

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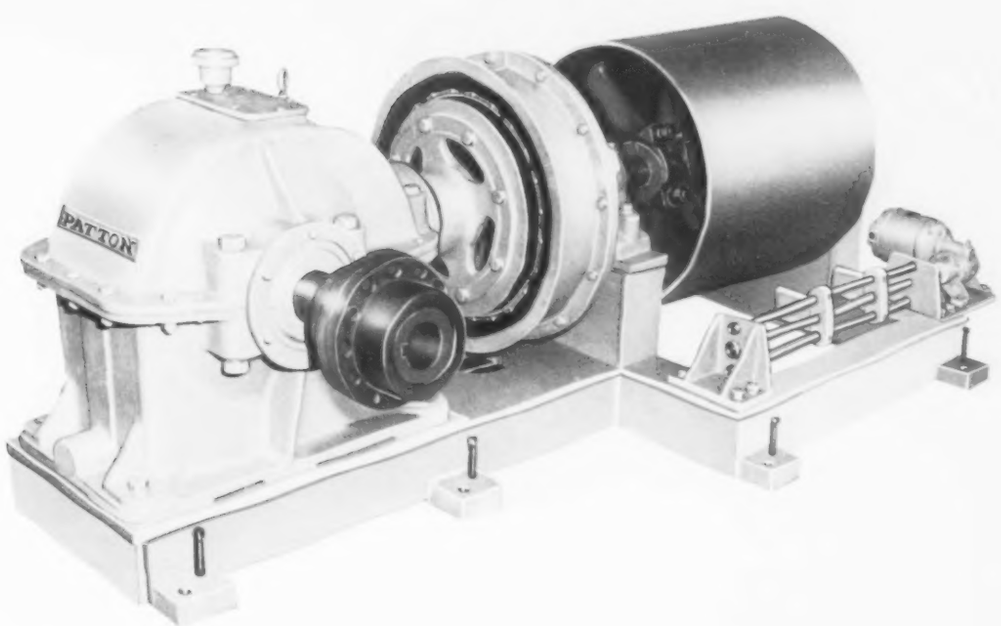


by **PATTON**

THE PATTON MANUFACTURING CO., INC. · SPRINGFIELD, OHIO

FAIRFAX 3-5595

822 W. PLEASANT ST.

COLLEGE RECRUITING II

PULP & PAPER's Industry Panel Says What Must Be Done

To Get Good Men

On some points it differs sharply with college officers. Leaders say: 1. Publicize industry, 2. Get skilled recruiters, 3. Follow the rules, 4. Make plans ahead

• The main points brought out by the placement directors who formed PULP & PAPER's panel on college recruiting in the October 1957 issue are:

1. Make your plans well in advance.
2. Keep your activities on an ethical plane.
3. Publicize your company and your industry.
4. Give students a clear knowledge of jobs.
5. Follow the rules set up by the schools.
6. Pick the right man to be your recruiter.
7. Establish close contacts with schools.
8. Find out from schools what others are doing.

Generally, industry executives who have actually engaged in college recruiting agree with these precepts, but with some exceptions and further suggestions. In accordance with its usual policy, PULP & PAPER will not say which individual made any particular comment, but will simply report what was said.

Most Important Point: Publicize the Industry . . .

Everyone agrees this is of paramount importance. One panelist remarked, "The most significant part of the article to me is that by Mr. (J.A.) Marks (U. of Wisconsin placement officer) dealing with the importance of the pulp, paper and board industry. Teachers and students simply do not realize the importance of our industry and time and time again focus on petroleum, rubber or iron and steel, excluding opportunities in paper."

Another adds, "The advantages of more emphasis in that direction would be greater than the advantages of streamlining our other recruiting efforts."

Need Good Relations with Schools

"I believe it is desirable to encourage graduates presently in our employ to keep in contact with their respective schools. This is particularly true for those in more responsible positions. It enables the prospective employer to keep schools informed of opportunities available and generally will result in a better understanding between all parties concerned."

"Faculty and student employment programs, brochures and films all help, but mainly we suggest that the industry not miss an opportunity to get to know educational people and students on a personal basis. If we do only this, the techniques and tools needed to tell our industry's story of opportunities will follow quite naturally and our industry's people will use whatever tools work best for them."

A Poor Job by Paper Company?

"Mr. Marks' comments on the need for publicity strike a responsive chord," said one executive.

"We certainly agree," said another.

But a question is raised: "I am surprised by Mr. Marks' reference to the remark by a student from one of the paper mill towns, 'Why does an outfit like that need engineers?' It looks to me as though the management of such an organization must be doing a very poor industrial public relations job. It is also possible to think, of course, that the student could have had a chip on his shoulder."

Need More Publicity Tools

"There are many ways, of course, to publicize an industry. I agree that the paper industry is not as well publicized as it might be. Group meetings, film presentations, campus newspaper advertising, returning alumni visits, visits to faculty members by technical men, have all been tried and to my mind reach only a very small percentage.

"In our case adequate distribution of the 'Job Outline' to the placement

Executives "Beg to Differ"

Several areas of disagreement with the placement directors' advice (Oct. 1957 issue) were pointed out by Pulp & Paper's panel of executives:

1. Recruiting procedure set up by colleges is too formalized.
2. Placement directors could do more to inform students about companies.
3. The advice applies only to a situation where potential employes are in short supply. With jobs less plentiful, these practices aren't necessary.
4. Literature furnished to students is a wasted effort—they don't read it.
5. Salary is more important than placement directors indicated.
6. Colleges should prepare directories of graduating classes.
7. It is a mistake to be too specific about positions available.

bureau as well as to faculty members, television advertising by the corporation, our summer program of hiring outstanding students and an occasional faculty member have all worked to our benefit.

Movie Is a "Flop" . . .

"The booklet 'A Guide to Career Opportunities in the Paper Industry' (by APPA and Beloit College, grant from Beloit Iron Works) has in my opinion been very effective, but the film by the same name has been a flop. The first edition of the 'College Placement Annual' in which we have an advertisement has produced more inquiries than any other medium we have used in the past.

"I can't help but feel that one reason for the lack of effective publicity is that the pulp and paper industry as a whole has not decided what the ultimate objective is. All in all, however, I feel that this industry is getting to be better known as more and more firms are actually recruiting on the campus and, in the long run, this may turn out to be the answer."

"Our company uses many types of company publications. A very popular one is the APPA booklet, 'A Guide to Career Opportunities in the Paper Industry' now supplemented with the new film which is already on loan to high school and college groups. A map showing our areas of operation is a popular gimmick with students.

"Recently we used an attractive display showing career opportunities in chemical and mechanical engineering and tracing the personal story of University of Washington (Seattle) graduates. The display was used during their open house and was maintained in the Engineering Building for two weeks. Much favorable comment was received from both students and faculties who are interested in seeing pictures and stories of young graduates they know or have heard of. A lot can be done to improve the media of communications between our industry and the secondary and upper level school institutions."

Literature Isn't Always Helpful . . .

Several comments expressed dissatisfaction with the results obtained by use of brochures.

"In general we agree with all of the ideas expressed by the placement officers with the possible exception of No. 4 in the Code (that the employer furnish suitable literature to give students a true picture of the organization). We do provide literature as recommended, but have some doubts as to its value until the actual interview takes place."

"Recruiting brochures are helpful but at the colleges they are as plentiful as sands in the desert, and often do not receive any more attention than this from the busy student who goes from interview to interview. He frankly doesn't have time to read them."

"I suggest some better method be developed to inform students about the industry before the interview."

Summer Employment Is Helpful

Just how important summer employment can be is indicated by this remark: "Four hundred seventy students were employed last year at our various divisions. Some of them we hope will be future scientists and engineers with us. This year we are starting a program of recruiting faculties and we hope to accelerate this program. This is an area that seems well worth exploring. The glamor industries such as oil, aircraft, etc., have been doing this for years and find that it pays dividends to them in having year-round missionaries back at the college."

Others agree: "More effort could well be spent in this direction," said one executive. Another commented, "Industry will gain by giving summer employment to students and thereby getting to know them."

Other Ideas for Publicity

One panel member had a number of suggestions for publicizing the industry: "We can help the high school student get a more realistic picture of what science and engineering really are by having our best speakers in these fields tell them about it. They honestly have little conception of what goes on in these jobs in our plants. Career Days are an open invitation to us to demonstrate our wares. A lot can be done to improve the media of communications between our industry and the secondary and upper level school institutions.

"Institutional advertising telling of the paper industry's growth and its opportunities can help. Last Christmas a simple little Christmas card to students whom our recruiters liked paid off by helping to recruit him when he graduates. Gift paper packages to faculty and placement officials seemed to create a favorable impression of our company, its products and people.

"During the past several years our company has provided scholarships, fellowships, operating grants and unrestrictive gifts in the areas of high education."

Need More Than "Polite Hosts"

"College and school relations are probably not much different than many of our everyday business problems. People enjoy dealing with others they know and this is certainly true in educational institutions. We suggest that in the areas where our company operates, our levels of management should get to know educational people on a personal basis and devote more than seasonal attention to them.

"Just last week we invited 1,200 students and their parents from a nearby technical high school to visit our plant for the evening and we earnestly hope that their treatment and impressions will encourage some to join us in later years. It seems to us that we need to be more than just polite hosts and actually go out and sell the opportunities we feel our industry offers."

"You Need a Good Recruiter" . . .

Next to publicizing the industry, the point mentioned most often by the panel is the necessity of getting a good man as recruiter. As one executive put it, "I agree with Mr. (Philip J.) Brockway (U. of Maine placement director) that in the mind of the student, the recruiter is 'Mr. Company,' and for that reason it is of utmost importance to appoint the right man for recruiting."

Here are some ideas on selection of recruiters:

"The use of supervisory personnel on recruiting teams has proven valuable. It points up to our people an awareness of the need for developing and maintaining close personal relationships with school people. The recruiter reflects to students and school their only visual picture of the company he represents and his personality and skills have much to do with company getting its share of graduates."

"We Narrow Our Search"

"Assuming the selection of a proper interviewer—in practically every case we use a person trained for this work or an executive of the company—we narrow our search to a very few colleges and universities. We always plan for plant visitation where the applicant can meet personnel of the company from the president right through the organization. In this way we inject the human element which is most important."

"Two basic principles are, I think, fundamental to successful recruiting: first, the recruiting agent for the mill must properly reflect the management's philosophy of complete sincerity, with no over-selling, no high pressure, etc., and second, proper recruiting must be regarded as a very

Presenting the Other Side of the Picture

In the October 1957 issue of PULP & PAPER, a panel of placement directors from ten universities gave good advice on how to develop and maintain a successful college recruiting program. Now 13 industry leaders who have wide experience and interest in this subject present their views.

Is a college recruiting program worth the expense and effort involved? Do the suggestions made by placement directors bring good results in actual practice? Which ideas were most helpful? What additions or changes could be made, from the standpoint of the companies engaged in college recruiting?

PULP & PAPER presents this distinguished and authoritative panel of industry leaders to answer these questions and add some comments of their own:

J. E. Alexander

Raymond E. Baker

Loren V. Forman

W. R. Haselton

David L. Luke

B. T. Mullaney

G. W. E. Nicholson

Edwin H. Olmstead

Elmer H. Jennings

George Olmsted, Jr.

T. R. Probst

H. T. Randall

A. D. Wilkinson

J. E. ALEXANDER
President and General Manager, Nekoosa-Edwards Paper Co., Port Edwards, Wis.

RAYMOND E. BAKER
Manager of Manufacturing (Tacoma), Weyerhaeuser Timber Co., Pulp Division.

LOREN V. FORMAN
General Manager, West Coast Manufacturing and Lumber Operations, Scott Paper Co., Everett, Wash.

W. R. HASELTON
Vice President—Operations, Rhinelander Paper Co., Rhinelander, Wis.

ELMER H. JENNINGS
President, Thilmany Pulp & Paper Co., Kaukauna, Wis.

DAVID L. LUKE
President, West Virginia Pulp and Paper Co., New York

B. T. MULLANEY
Manager, Specialized Personnel Placement, Crown Zellerbach Corp., Portland, Ore.

GUNNAR W. E. NICHOLSON
President, Tennessee River Pulp & Paper Co., New York

EDWIN H. OLMSTEAD
President, The Eaton-Dikeman Co., Mount Holly Springs, Pa.

GEORGE OLMSTED, JR.
President, S. D. Warren Co., Boston, Mass.

T. R. PROBST
Vice President, Operations, Brown Co., Berlin, N. H.

H. T. RANDALL
Vice President and Director of Research and Engineering, The Champion Paper and Fibre Co., Hamilton, O.

A. D. WILKINSON
Vice President, Kimberly-Clark Corp., Neenah, Wis.

real job of work, with a high-grade individual to do the recruiting on a sustained basis. It can't be hit and run—now and then—when you think you need some people."

"We Approve of the Code" . . .

Many panel members commented favorably on the code which sets out the responsibilities of both companies and schools. "I am very much in accord with the code as developed by the committee of which Linn Cason (men's placement director, Purdue) was chairman. I think this lays down the fundamental principles to govern recruiting practices," says one.

Other firms are now using the code: "After reading your college recruiting article, I sent for a number of copies of 'Recruiting Practices and Procedures' and a copy was given to our research director when he visited the University of Wisconsin for interviews several weeks ago. I am sure it will be of assistance."

"I have distributed the code of procedures to all of our personnel responsible for the hiring of college graduates. This code, while developed by cooperative efforts of several different societies, has now been adopted on a national scale and will have a terrific impact on all concerned in years to come."

Planning Ahead Is Essential

The advice to plan ahead was given a hearty second by several executives:

"Our firm makes college recruiting plans and itineraries in October. We learned that the best dates go to those who make an early bid. This is understandable when schools like U.C.L.A., U.S.C. and Oregon State have told us of over 600 companies being on their campuses between November and May."

"I think every firm has to plan its manpower requirements and reach a decision as to the scope of the college visitation program to be carried out. From a practical standpoint one must schedule dates a year in advance or they do not have much of a chance of even getting on campus at all."

Special Problems of Small Mills . . .

Smaller companies have special problems, reflected in these remarks:

"I believe the ideas expressed in your article on recruiting are good but am of the opinion that some of the procedures recommended would be applicable only to companies having a high annual requirement for college graduates or one embarked on a program of expanding some particular field of activity.

"It seems to me that too much emphasis has been placed on adhering to a prescribed and formalized procedure. I appreciate, however, the demands being made for the student's time and the probable lack of consideration on the part of many prospective employers."

Objects to Comment on Small Mills

"I can only disagree with one statement to any marked degree, and that is with Mr. Marks who suggests that smaller mills may be better off to avoid organized college recruiting. I vaguely suspect that about the only thing that would be better off with such an arrangement would be Mr. Marks, who is probably plagued with many of the smaller mills and companies of Wisconsin attempting to secure the services of students trained at public expense at the university.

"I will agree, however, that companies generally do not do as well by popping in every three or four years as they would by regularly interviewing at a few colleges. This should not be too difficult since usually a company of any size is looking for at least one or more new people each year in some field of technology, engineering or the business side of the organization."

"I disagree with Mr. Marks that small mills can avoid college recruiting and depend on ads and agencies for their technical help. It seems to me when they need a man and have a job for him, it would be well worth a top executive's time to establish a relationship with several colleges and recruit a man who could be developed in the small mill. My guess is that few companies lose many real top flight men by the ad and agency route. So without college recruiting, what the small mill often gets from ads are men on the lower end of the scale."

Another panel member, supporting Mr. Marks' advice to smaller mills, says, "Our limited experience is that the man fresh from college is not particularly interested in working for a tiny organization of which he has never heard, and that such a company demands broader background and greater maturity than is usually available in the new college graduate."

Raises More Questions . . .

Perhaps the colleges themselves could do more to prepare their graduates for employment in smaller mills. One panelist asks, "For what sort of firm does college work prepare a man? Is the new graduate glamor-struck through his formal schooling by the conspicuous or well-publicized accomplishments of the large concerns? Do large and small concerns compete for him on an equal footing? Is there a tendency to recognize size as the only criterion of industrial success? Can the recent college graduate visualize the opportunities of bringing his training to an organization so small it may never previously have afforded talents such as his? Can he also see the risk of entering an organization where his performance will be critically spotlighted? Are some individuals best suited to large concerns, and others to small ones? If so, how can screening be done?"

Salary Cannot Be Overlooked

One panel member felt insufficient importance was attached to salary.

"The view has been taken that salary is not everything with college graduates these days, and I will wholeheartedly concur with this. It is, nevertheless, something that a job applicant can understand, while possibilities of promotion are either not obvious to the applicant or are difficult to explain. In my opinion, the student does not give as much thought to the future as some people would like to have us think but rather will accept an offer from the company he likes which pays the most money. The student has difficulty comprehending what is involved in opportunities for promotion.

"Our company has not attempted to offer the highest salary possible but has tried to be above what we know to be approximately average. As you might gather from the foregoing comments, this has not been as successful as I personally thought it should be. It is possible we may modify our salary offers slightly which, while most certainly undesirable from an industry standpoint, is what other Wisconsin paper companies are doing and thus facilitating recruiting."

Should Not Be Too Specific

As for the advice to be specific about the job to be filled, one executive comments:

"There is argument on both sides. We are more specific than most firms and I wonder sometimes if we pass up good prospects because of our policy. It might be well to consider a broad training program, continue to maintain our high standards, but not expect an individual to be able to select a specific position at the time of graduation. Actually, only about 10% of

the graduating seniors know what they want to do. Ninety percent either do not know or can be persuaded to start anywhere."

Which Graduate Is Best?

There are places for both average and top-notch graduates, according to these remarks.

"I am not too impressed by the arguments presented on the topic, 'When Recruiting Backfires.' I feel that if you search long enough and present the opportunities right, it is possible to find a top-notch graduate who is willing to locate anywhere. I do not necessarily consider the man with the highest grade point average as the best all-around candidate."

"I very much agree with Mr. Carl Dickinson (U. of Washington placement director) deploring the tendency of recruiters to proselyte the outstanding campus leader and ignore the average graduate. Having reviewed the development of graduates from my own class and also by studying parallel situations from various other schools, I am of the opinion that as far as plant management and operation are concerned, the average graduate is a better bet than the star. For that reason I have for years instructed interviewers not to pay too much attention to star performers but concentrate on the man with average scholastic record and performance."

Don't Neglect Follow-Up

Two panel members emphasized the importance of keeping an employe happy after he accepts the job.

"The advice repeated several times in the article to keep the young engineer busy on meaningful work cannot be repeated too often, and a company which does not properly handle its young engineers can expect to get a reputation back on the campus which will create considerable handicaps for even the best recruiter."

"Almost without exception there comes to any new employe a period of questioning—a good thing in itself but dangerous if not followed by careful counseling."

What the Schools Could Do

Some panelists pointed out actions the schools could take to facilitate recruiting:

"Mr. (John L.) Munschauer (Cornell placement director) warns against wasting an applicant's time by having him 'stand around waiting to see busy executives.' It is true that careful planning might hold delays to a minimum. However, students should be made aware of the fact that it is not always possible to drop everything when they present themselves for an interview. An executive's day is pretty well filled up, and occasionally a delay in an appointment is unavoidable.

"The comment has been made here that it might be helpful if the colleges could prepare directories of the graduating classes. Most of the time the recruiter sees only those members who have the time and interest to sign up for an interview."

One panel member thought placement directors could do more in this direction. "One suggestion we would make—perhaps placement bureaus should plan on a long range basis to do more counseling both with the students and with the faculty in an effort to educate both as to the type of firms visiting the campus."

Other Suggestions . . .

Here are a few specific suggestions on different aspects of a recruiting program:

"We find it helpful in our close contact with certain schools to go beyond the placement director. Comments from faculty members and from college administrators are sought, not always directly. In the final analysis, it is the personal element we try to stress, so we start by trying to have applicants of reasonably known quality come up for consideration."

"Recruiting was expanded last year to cover 35 colleges for a total of 45 visits. Thirty-one men from high levels of supervision and members of the college recruiting staff visited these schools from November to April."

"I am in accord with Mr. (George N. P.) Leetch (Penn State placement director) that a company should recruit from several colleges without overdoing it and thereby bring about a cross fertilization of ideas among the new employes. This is something that I have personally carried out very rigidly over many years' time."

Situation May Change

The possibility of a change in number of jobs available will affect recruiting practices, suggests one panel member.

Everyone is thinking of a situation where graduates are in great demand and supply is less than demand. Under this circumstance, the suggestions of planning ahead, analyzing the individual company requirements, maintaining close contacts, being competitive, etc., represent a sensible way to proceed. In any case, following the rules and being ethical surely are commendable.

"It would take very little turndown in business to upset the supply of graduates versus demand ratio, and under these circumstances probably the sharpened techniques outlined would be unnecessary. Certainly, sensible mills will put into the effort a variable amount of time and money depending on this supply-demand ratio."

College Recruiting is a "Must" . . .

That is the opinion of several panel members. As one of them expressed it, "In my judgment, PULP & PAPER's article on college recruiting can be profitably read by any executive responsible for increasing the college-trained manpower base from which many future executives of the company will be developed. It is an important problem, and I strongly feel that the company which is now failing to plan to get its share of graduates will find itself seriously handicapped in the future. It is the kind of planning that must take place each year."

A newcomer to recruiting found the ideas "very helpful and certainly timely for a company just beginning to set up a program." Others, with long experience in this field were familiar with the placement directors and agreed with their suggestions.

Problems Needs Attention . . .

Almost without exception the panel members remarked on the need for more attention to the problem of college recruiting. In their own words:

"I feel articles of this type cannot fail to do some good; probably the greatest good will come by emphasizing that it is a problem which needs attention."

"The ideas are helpful, especially for a company like ours which is just beginning to consider campus recruiting."

"There is a great deal of written and spoken misinformation about the problems of recruiting and the article is most helpful."

Pressure for Recruits Eases

As PULP & PAPER went to press with this panel discussion, many major industries were cutting back in the number of campus interviews planned this year. Some companies decided to cut them out altogether. Most of these appeared to be industries which were reducing operations much more than pulp and paper.

But in 1958 businesses are going to be much more selective in signing up college recruits. Students are more anxious to sign up for interviews, said a University of Illinois official. A slight drop in starting job salary offers also was reported at Illinois. The average was around $480 a month for engineers.

Recommended . . .

PULP & PAPER goes outside this industry in this article for advice on recruiting talent from colleges.

This was done on the recommendation of prominent pulp and paper company executives who are directing such work for their companies.

They said that one of the best guide booklets available on the subject was produced by sales training manager G. F. Kershner of Continental Oil Co. PULP & PAPER got a copy, and in this article, summarizes the tips he offers to industry recruiters in their college contacts.

Tips for College Recruiters

Booklet maps the course to follow to carry out successful campus visits in search of talent

There's no substitute for experience and with even the best training and preparation, a "green" recruiter has a lot to learn. G. F. Kershner, manager of sales training for the marketing department of Continental Oil Co., Houston, Tex., makes it as easy as possible for company representatives going to college campuses to learn the ropes of recruiting.

The sales training division furnishes a booklet, "Selection Guide, College Recruits," which maps the course to follow in one, two, three order, from planning the campus visit to making the employment offer. A "Recruiting Guide" is also provided, with specific information about various colleges.

Planning the Campus Visit

The number of men to be recruited determines the number of colleges to visit. In general, experience has shown that with good luck two men can be recruited from a college, but the average is closer to one. So if four men are needed, it is wise to visit at least three or four colleges. As for timing the visit, the guide recommends a "middling" date; early in the season the men may be reluctant to commit themselves, while later on the crop is apt to be "picked over."

The placement officer has a powerful influence on the seniors, steering them toward certain companies and away from others, based on his own understanding of relative opportunities and past treatment of graduates. Therefore recruiters must sell themselves and their company not only to students but to the placement officer and other faculty members.

Since one of the main problems is to line up the top-notch seniors for interviews, two practices are used. One is to have key marketing men return to their own alma maters to conduct interviews. The other is to have recent graduates return to their campuses as "talent scouts" several weeks or more in advance of the scheduled campus visit. But the placement office must never be bypassed.

The Campus Visit

A "Selection Work Sheet" is provided as an aid in conducting the first or "screening" interviews and as a record of the entire course of investigating the potentialities of prospects. The information required to fill out the first part of the work sheet is obtained by informal questioning during the screening interview and gives a general picture of the student's qualifications. If, at the close of this interview, the recruiter decides the student has possibilities, he asks him to return after the last scheduled interview of the day to take a written I.Q. test and fill out an application form.

The men who pass the screening interview take the written test in a group. The "SRA Verbal Form Test," published by Science Research Associates, is used because it is reliable and requires only 12 minutes to take.

Follow-up on Campus Visit

The first step is to score the tests. About 75% of seniors tested do not meet Conoco's mental standards. The next step is to review the men's records and decide which ones to consider further. Then references from former employers, obtained from the application forms, are checked and a retail credit company character credit report is obtained. This must be done promptly as an outstanding man may be lost by too long a delay.

The candidates who have survived the screening interview, the SRA test and the reference check are then invited to the company offices for the main interview.

The Main Interview . . .

While to a certain extent the ground covered duplicates that covered in the screening interview, the obectives are different. In the screening interview the "burden of proof" is on the applicant. In the main interview the company is doing a good part of the selling. The company representative must give the prospect as complete and honest a picture of what the company offers and requires of him as possible.

At this time, too, a more careful analysis is made of the man's qualifications, including his family and financial background, his home life, his schooling, his money-earning activities, his hopes for the future, etc.

If the main interview is cleared succesfully, the man is referred to at least two other members of the company for relatively short interviews. Emphasis here is given to the man's appearance, personality, attitudes and other observable factors which contribute to an over-all impression of how he would fit into the organization and whether he could later assume leadership.

The Physical Examination

If at this point there is agreement that the man's qualifications are satisfactory, arrangements are made for him to take a physical examination. Care must be taken not to let the man think he has already been hired; an unfavorable result of the physical exam may disqualify him. Rather, he is asked to return to the office when the examination is completed.

The Employment Offer . . .

The manual emphasizes strongly the necessity of getting the whole picture before making a decision. All the previous steps, recorded on the "Selection Work Sheet," must be reviewed and considered carefully. Then the decision should be made and the man notified as promptly as possible. Marketing department policy provides that the manager of the division which is expected to benefit from the new employe's services shall have the final decision in hiring him.

It is preferable to make the job offer verbally and tentatively agree on a starting date. If he accepts immediately, he can be personally welcomed as a new member of the team, meet some of the men he'll work with, and in general have his enthusiasm heightened for the company and his new job.

Seven in Quarter Billion Class

but there is no uniform pattern of business for pulp, paper and board. Some companies report a pickup in orders is beginning

By ALBERT W. WILSON
Editor, PULP & PAPER

● There are seven companies in this industry doing a quarter billion dollars business or better. They have been in that class for a couple of years or more. Like many others, they have enjoyed their best two years of business, and at least six will surely stay in that class in 1958 sales.

The "super seven" are, in this order: International Paper, Crown Zellerbach, Weyerhaeuser, St. Regis, Kimberly-Clark, Scott and Container Corp. of America. A glance at the accompanying table prepared for PULP & PAPER by Cyrus J. Lawrence & Sons of New York shows their sales in 1957 ranged from $940,428,000 to $256,116,000.

For one of the seven—Weyerhaeuser—a substantial part of sales is for lumber and plywood. But quite a few readers may be surprised to learn that Weyerhaeuser's pulp, paperboard, containers and cartons sales now exceed all its other products. Lumber used to be far ahead. Weyerhaeuser's sales of $226,592,000 for only pulp, board and board products sales would drop it back into seventh place in the above list. This includes its new Kieckhefer-Eddy division.

Of the seven leaders, only two—Kimberly-Clark and Scott Paper Co.—both heavily in consumer products, showed an increase in 1957 sales over 1956. Crown Z finished mighty close to a tie with '56 figures. Some others were off very little. There were other companies which set all-time record sales in 1957. These include Brown Co., Puget Pulp, Diamond-Gardner, Mead Corp., Champion, Consolidated Water Power & Paper Co., River Raisin Paper Co., Federal Paperboard and M & O Paper Co.

All these companies were caught in the "profit squeeze" of rising costs, so that even with better sales, earnings were down from the year before. Exceptions included Kimberly-Clark and Champion. Scott was off very little.

Signs of Optimism . . .

What of 1958? Roy K. Ferguson, chairman of St. Regis, expects a better year than 1957. A few others report things are "picking up." Crown Z sales picked up in the first quarter. Powell River expects a poorer year. Newsprint and board manufacturers are not optimistic for the near future, though nearly all have expectations of an upturn in a year or two. Standard Packaging Corp. sales, however, were 4% better for two months this year than in 1956.

International Paper, one of these years, will become a billion dollar company. Its sales are more than twice its nearest fast-growing rival, Crown Z. But only a few years ago I.P. was four times as big as any other company in this industry. Its sales dropped only 3% last year from a record $969,618,000 in 1957. Its net profit declined 10% from $86,628,013. In 1957, I.P. made over 4½ million tons of paper, board and market pulp, but 4% less than in 1956.

President John H. Hinman says the impact of the halt in growth of the industry had a more marked effect on business sentiment this year than in

Representative Pulp and Paper Companies
Sales and Earnings—Year 1957

The sales and earnings for the year of 1957 were especially prepared for PULP & PAPER by Cyrus J. Lawrence & Sons, members New York Stock Exchange, from statistical services and published reports. While the figures are believed to be correct, no guaranty is given as to their accuracy.

	Net Income (000)	Income Bef. Taxes (000)	% of Sales	Net Income (000)	Net Per Share
MARKET PULP (Also Lumber, etc.)					
Brown Co. (11/30)	$ 61,158	$ 3,180	5.2%	$ 2,080	$0.80
Puget Sound Pulp & Timber	24,888	n.a.	—	3,040	1.30
Rayonier, Inc.	117,500	11,269	9.6	6,250	1.13
MacMillan & Bloedel (9/30)	171,181	20,230	11.8	10,224	1.94
Weyerhaeuser Timber	420,601	83,125	19.8	53,425	1.76
NORTHERN INTEGRATED COS.					
Abitibi Power & Paper	128,199	25,352	19.3	12,502	2.86
Consol. Water Power & Paper	71,031	13,318	18.7	6,276	2.47
Diamond Gardner	170,645	15,429	9.0	8,129	2.15
Eastern Corp.	25,113	1,839	7.3	1,129	2.85
Glatfelter, Ph.	25,340	4,938	19.5	2,261	6.18
Great Northern Paper	63,326	5,011	7.9	2,846	2.42
Hammermill Paper	44,480	4,371	9.8	2,308	2.04
KVP (9/30)	54,472	6,559	12.0	3,172	3.86
Oxford Paper	58,687	7,030	12.0	3,364	3.05
Warren, S. D.	58,287	6,126	15.0	3,016	2.75
INTEGRATED—NORTH & SOUTH					
Champion Paper & Fibre (12 mos. ended 12/31/57)	168,373	25,925	15.4	12,388	2.71
Container Corp. of America	256,116	29,790	11.6	14,590	1.36
Crown Zellerbach	460,609	72,062	15.6	38,051	2.66
International Paper	940,428	149,138	15.9	78,388	6.17
Kimberly-Clark (12 mos. ended 1/31/58)	348,242	52,922	15.2	26,696	2.95
Marathon (Merged with Amer. Can)					
Riegel Paper	61,077	6,154	10.1	2,871	2.19
St. Regis	360,965	42,795	11.9	21,125	2.53
Scott Paper	275,006	42,560	15.5	21,560	2.68
West Va. Pulp & Paper (10/31)	191,261	22,610	11.8	11,968	2.31
Union Bag-Camp Paper	160,732	36,883	22.9	18,133	2.49
NON-INTEGRATED PAPER COS.					
American Writing Paper	15,586	1,505	9.7	705	2.60
Sutherland Paper	61,011	6,560	10.8	3,135	2.93
CONVERTER					
Dennison Mfg.	40,992	4,103	10.0	2,104	3.26

the recessions of 1949 and 1954. Yet I.P. is spending over $50,000,000 this year on new capacity and all the major companies are continuing improvements or actually adding capacity to the tune of many millions, and are definitely anticipating it will be needed not long after the work is finished. Better machines, better processes, better products—these are recognized as musts. Undoubtedly new units will shoulder out some of the old.

I.P.'s new on-machine coated paper machine at Corinth, N.Y., was due for April startup and this month its new two-machine mill at Pine Bluff, Ark., was to be ready. The Pine Bluff mill, entirely concrete, with much stainless steel, aluminum and glass, has been called a "monument" to the modern pulp and paper industry—the biggest single shot investment in actual plant in history.

Crown Zellerbach completes a coated paper mill at St. Francisville, La., early next year, and this year is bringing in another paper machine at Elk Falls, B.C., a box plant at Dallas and a tissue machine at Antioch, Calif. After four successive record breaking years, it would have had another in 1957 except for the British Columbia strike. Its sales were down less than 1% from $462,350,000 in 1956. Net income was down 24% to $38,051,000.

Weyerhaeuser sales declined 4% from $438,000,000 in 1956 (counting Kieckhefer-Eddy in both totals), but production and sales of pulp, board, cartons and containers increased. Lumber pulled Weyerhaeuser down. Total earnings were down 17.5% from $64,768,000.

St. Regis sales of $360,900,000 compared with $370,000,000 in 1956. It is still possible to reach $380,000,000 in 1958, says Mr. Ferguson, although the first quarter was down over 8%. Buyers now are increasing orders—an upturn no later than mid-year is seen by St. Regis.

Kimberly-Clark sales were up substantially last year and even earnings were up slightly. Scott sales were up -5,000,000 and earnings were off a bare $800,000 to $21,560,126. Container Corp. of America sales dropped from $276,008,765 to $256,115,744.

What Others Did . . .

Even with suspension of the Crowell-Collier magazines, a big market for Mead Corp., that company squeeked through 1957 with sales of $192,805,878, up about $250,000. Earnings were down over $2,000,000 to $11,930,142. Champion boosted its sales by a fat $14,000,000 to over $168,000,000, and net income was up over $1,000,000. Despite a strike, Consolidated Water Power & Paper's sales were up nearly one million to $71,031,106, but net income was up $1,000,000 to $6,276,000.

Union Bag-Camp's sales dropped only about $2,300,000 to $160,731,000 but income was off even a little more than that. It is going ahead with new machines at Franklin, Va., next year and at Savannah in 1960, which will boost its production 25%. In the non-integrated field, American Writing Paper sales were down one half a million and earnings were down 124,000.

Rayonier's sales were down from $137,873,000 to $117,567,000 and net income was cut more than half to $6,249,375. Interesting is the fact that while its Shelton, Wash., mill has been "mothballed" since last August, its second mill at Jesup, Ga., came on line Oct. 21 and demand is strong for Jesup products now ranging from paper pulp to cellulose for tire cord. There is now 100,000 tons capacity there, but only a 50% increase in personnel. A cutback in Japanese purchases hurt Rayonier. Another "mothballed" mill is Mead's Harriman, Tenn., board mill.

Diamond-Gardner sales climbed $2,000,000 to $170,645,000, but its net income dropped nearly $2,700,000. Fibreboard Paper Products Corp. sales dropped $1½ million to $125,697,000, and net earnings even more, to $4,086,000. And so the story goes—these were typical reports.

Some 1,600 pulp and paper management and sales execs heard Walter E. Hoadley, Jr., youthful treasurer of Armstrong Co. and former Eisenhower advisor, say during Paper Week that there would be "no sharp upturn" this year but the business climate will be favorable. Just the other day in Chicago, Mr. Hoadley gave almost the same speech, but there was a positive twist to it—for what it's worth. He definitely said there *will* be an upturn this year. And the year should show near record totals for the economy, he predicted.

A pretty good expression of the industry's situation was made by a paper industry leader as this issue went to press. He said:

"The pulp and paper industry is still a mighty healthy growing youngster with a bright future who has only proven himself human by growing a bit faster than his strength."

Elsewhere in this issue, PULP & PAPER reports on an activity which may be the real salvation of pulp, paper and paperboard—the development of new uses. A whole flock of new ones are reported. May there be many more!

Corrosion Problems Spotlighted By Pulp and Paper Engineers

For the first time since its annual conferences were begun 14 years ago, the National Association of Corrosion Engineers included a pulp and paper symposium at its meeting recently in San Francisco. Jack M. Wilcox, Electric Steel Foundry Co., Portland, Ore., was chairman and H. O. Teeple, of Tappi, co-chairman.

The first paper by Steve Baisch, Kaukauna, Wis., consulting engineer, (delivered in his absence) reviewed recent corrosion activities in TAPPI and future plans for combatting corrosion.

I. S. Levinson, Ampco Metal, Inc., Milwaukee, spoke on "Materials Behavior and Corrosion Characteristics in Paper Mill Wet Strength Solutions." He said maintenance costs have risen as new chemical engineering methods have been introduced in paper mills. Chemicals treatments, such as wet strength introduce more corrosion problems.

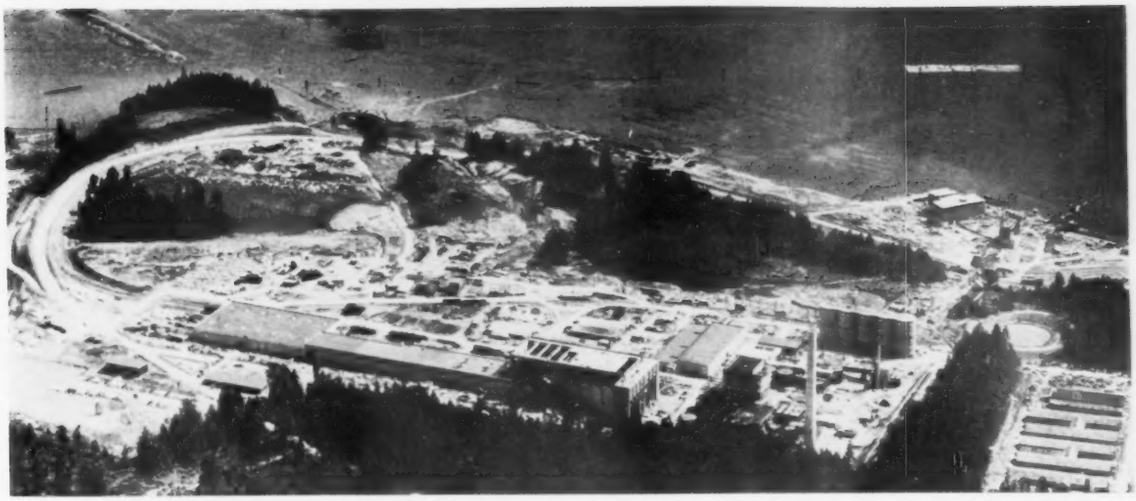
A. H. Lundberg, Seattle chemical engineer, described the known corrosive agents found in each department of a sulfite pulp mill. His son, Lennart, gave the paper. The final paper, by Norman Groves, of Carpenter Steel Co., discussed corrosion case histories involving stainless steels in pulp and paper.

Merrill A. Scheil, director of metallurgical research, A. O. Smith Co., will be chairman of the symposium next year in Chicago.

World Meeting Set For Mechanical Pulping

Otto Brauns, director of applied research, Swedish Wood Research Institute, Stockholm, will deliver the opening address of the Third International Mechanical Pulping Conference, Sept. 10, at Chateau Frontenac, Quebec City, Que. The three-day conference is jointly sponsored by the Canadian Technical Section and TAPPI (U.S.).

The technical program is prepared by a committee under E. H. Johnson, Stevens & Thompson Paper Co., Greenwich, N.Y. On the program are: J. K. Kirkpatrick, Bowater Southern Paper Corp.; Piero Bersano, Cartiere Burgo, Torino, Italy; James Hunter, Powell River Co.; M. S. Quinn, Quebec North Shore Paper Co.; W. Gallay, E. B. Eddy Co.; G. Herwig, Finch, Pruyn & Co.; A. A. Yankowski, Kimberly-Clark Corp.; F. W. Bishop, Southland Paper Mills; T. G. Shepherd, Donnacona Paper Co.; F. W. O'Neil, College of Forestry, Syracuse, N.Y., and H. Sternberger, Jr., Halifax Power & Pulp Co.



B.C. FOREST PRODUCTS LTD. EXPANDS into new field with 500-ton mill now producing quality bleached kraft pulp at Crofton, B. C.

Crofton Achieves High Efficiency

with special equipment, all through newest market pulp mill on Vancouver Island. Almost from start, experts produce top grade pulp

Goals: Automation, Better Wood Use

• Intensive wood utilization and extensive process automation were combined in the new British Columbia Forest Products Ltd. plant at Crofton, B.C. Designed to produce high quality bleached sulfate pulp at the rate of 500 tons per day, it presages continued and accelerated growth in the province's economy which is predominantly founded on forest crops and forest industries.

B.C. Forest Products, a large producer of lumber, veneer and plywood with operating plants at Vancouver, Victoria, Youbou and Hammond, made entry into the pulp field when this $46 million plant shipped its first pulp in February. The plant is located at Crofton, on Vancouver Island's southeast coast, centrally situated for obtaining raw-product wood—consisting of chips made from mill wastes, market logs, and low grade logs from its own forest holdings.

By expanding its forest products manufacturing enterprises to include pulp, the company materially extends the utilization of forest crops throughout coastal Canada—a basic objective in BCFP's entry into the pulp field.

"Crofton Kraft," long-fiber coniferous pulp processed to 88-90 brightness range, is exclusively distributed by Mead Pulp Sales, Inc., international pulp marketing organization. A member of the plant management team said "Crofton Kraft will be competing in the world market. That is why it must be top quality."

The major expansion was conceived and undertaken under top leadership of E. P. Taylor, a leading Canadian industrialist serving as chairman of the board, and the late Hector G. Munro, president of the firm from 1953 until his death late last year. He has been succeeded by Charles D. Dickey, Jr., from the Scott Paper Co. organization. Scott is a minority partner in B.C. Forest Products.

Designed by Howard Simons and associates, the mill includes some of

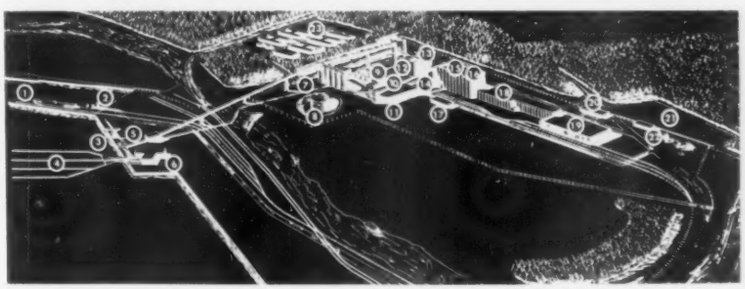


DIAGRAM OF CROFTON MILL

1. Deep sea dock
2. Car ferry slip
3. Scow dock
4. Booming ground
5. Chip screen building
6. Woodroom
7. Chip silos
8. Fuel storage
9. Recausticizing
10. Repair shop
11. Raw materials warehouse
12. Recovery bldg.
13. Boiler house
14. Blow slab and digesters
15. Pulping group
16. Pulping group
17. Laboratory
18. Machine room
19. Warehouse
20. Personnel service building
21. Parking area
22. Main office
23. Construction camp

the features his organization incorporated into such mills as North Western Pulp & Power at Hinton, Alta., and East Texas Pulp & Paper Co., Evadale, Tex.

Construction started early in 1956. Commonwealth Construction Co. was general contractor. The 50-acre plant-site occupies a point jutting out into saltwater where a deepsea dock, car ferry, barge slip and scow dock provide accommodations for waterborne traffic carrying both inbound materials and outbound finished product shipments. Mill buildings occupy a plateau about 70 ft. above sea level. Here are some outstanding features:

1. Efficiency

Production efficiency and the manufacture of quality pulp were paramount factors concerned in design of this mill. Consequently it was considered important that the systems be foolproof and highly adapted to instrument control and require only minimum maintenance and upkeep.

2. Pulp Handling

The plant's drying and finishing equipment have been designed for producing a clean, dry bleached kraft pulp sheet free from measurable brightness reversions. The resultant product is wrap-baled so it arrives in clean condition and breaks up readily in the consuming paper mill's Hydrapulping or slushing equipment. Vacuum drying is used to maintain the pulp's strength, brightness and viscosity.

3. Single-Unit Processes

Production has been confined to single-unit process equipment, to the extent possible, as a means to achieve lowest costs for labor and maximum process supervision. These cost-quality factors influenced the high degree to which use is made of instrumentation.

4. Quality Controls

Control stations are located in the digester building, the bleachery and in the machine room where chemical and physical tests continue around the clock to ensure quality and uniformity.

5. Construction Features

Structures are built of reinforced concrete without exposed steel, to minimize maintenance and prevent pulp contamination from rust and other foreign matter.

Key Executives at Crofton

Dickey

Holland

Grieve

Baker

Richmond

Wilson

Jones

Bardsley

Gallagher

Pederson

In Canadian industry circles a great deal of credit for the early success of the new British Columbia Forest Products market kraft pulp mill at Crofton, B.C., is credited to its top personnel—especially the expert operating and technical men in charge.

Charles D. Dickey, Jr., the new president, has been a member of the board of B.C. Forest Products since 1955, was assistant vice president of Scott Paper Co., responsible for west coast operations with headquarters in Everett, Wash., prior to assuming his present position late last year.

Walter W. Holland, vice president-pulp, joined BCFP in 1955 as head of new pulping project; previously he was mill manager, Oxford Paper Co. and before that had extensive experience in eastern Canada.

John R. W. Grieve, mill manager, formerly was general superintendent of Canadian IP mill at LaTuque, Que.

D. H. Baker, assistant manager and technical supervisor, was assistant to the manager at the Harmac MacMillan & Bloedel mill, Nanaimo, B.C.

A. M. Richmond, manager pulp sales, was formerly executive assistant to the president of B.C. Forest Products.

Edward G. Wilson, general superintendent, was formerly kraft mill superintendent, Continental Can Co., Hopewell, Va.

G. S. G. Jones, resident engineer, came from the MacMillan & Bloedel Harmac mill, Nanaimo, B.C.

John H. Bardsley, technical service superintendent, held the same position at St. Lawrence Corp.

John L. Gallagher, personnel supervisor, formerly was with BCFP's logging-sawmill operations.

D. N. Pederson, office manager and accountant, held the same position at Scott Paper's Coos Bay, Ore. plant.

Woodroom is Operated by Four Men; Speedy System Accepts Outside Chips

The woodroom, chip screens and hog building occupy the area around the 450 ft. long scow dock at the Crofton mill of B.C. Forest Products Ltd. A Colby 6-ton hammerhead crane, which travels full length of the dock, unloads chips, hog fuel and limerock from the arriving scows.

The 4-man woodroom, currently the major source of chips, will get diminishing usage as more by-product chips are procured. This installation has capacity to provide all the chips required for full-scale mill operation. Designed to produce chips at 80 units per hour, the woodroom can handle logs ranging from 9 to 60-in. diameter and 8 to 90-ft. long.

A log haul, driven by a 125 hp motor through hydraulic coupling and Pacific Western 2-speed reducer, delivers logs from pond to mill deck. Two deck saws are provided for cutting into appropriate lengths of 24-ft. or less. A 102-in. Canadian Sumner circular cut-off saw processes the smaller and a 9-ft. L-M chain saw cuts the larger logs to length.

All logs are processed through a Canadian Sumner Bellingham type hydraulic barker from which those of 26-in. and smaller diameter go directly to a horizontal-feed 8-knife 112-in. Hansel chipper to be converted into chips at rate of 180 lfpm. Larger logs are reduced to chipper size cants in a conventional West Coast breakdown mill including Canadian Sumner 9-ft. bandmill in conjunction with a Heaps riderless carriage driven by Canadian General Electric amplidyne feed.

Bark and other foreign material contained in the barker effluent are recovered by Sweco 105-mesh dewatering screens located in the basement. The water is sewered following this cleaning.

Two sections of 60-in belt conveyor transport chips from the woodroom to a third conveyor of same size (extending from scow dock) which delivers to the chip-screening building. This structure contains four 20-unit surge bins, each equipped with a variable speed rotary feeder serving its respective Orville-Simpson Rotex chip screen, and a 36-in. Canadian Sumner rechipper for processing oversize wood from screens. A belt conveyor system transports the screened chips over a series of five 400-unit capacity storage silos for deposit according to species. Location of a remotely controlled tripper determines which silos receives the chips.

Hog fuel from the scow dock and refuse from the woodroom are transported to a Gruendler 6XD hammer hog located in the chip-screen building. The outside fuel and local refuse are processed through this unit before going to the boiler plant.

Chips leave the storage silos via Link-Belt rotary feeders for transport by belt conveyor to the digester building, discharging at a tripper through a charging funnel directly into the digesters. Enroute the chips pass over a metal detector and Merrick Weightometer. The entire conveying system is controlled from the digester operating floor.

For handling trailer-transported chips arriving at the plant, a crane lifts the trailer to dump the load into a bin. A chain conveyor connects with a belt transport unit to take the chips some 250 ft. to the chip silos. This unloading system's capacity of 60 units per hr. provides fast turnarounds for participating haulers. The same system is equipped for handling chips arriving by rail car.

For Pulping, Washing, Screening, Crofton Boasts Complete Instrumentation

Seven Dominion Engineering Co. 6100 cu. ft. digesters, built of Lukens A-285 grade B firebox steel with ¾ in. corrosion allowance for 150 psig. operation, have sufficient capacity to permit extended low-temperature cooking cycles at the new Crofton, B.C., market kraft pulp mill. Electric Steel Foundry Co. Type 304 stainless indirect heaters and Bingham circulation pumps, of 3250 gpm (U.S.) capacity at 60 ft. head, provide 8-minute initial liquor turn-around.

The blows are released through 10-in. Yarway valves at around 100 psi to an 87-ft. high by 31-ft. diameter Dominion Bridge blow tank. This unit, with capacity for holding three blows, is equipped with a Lundberg Ahlen jet-condenser heat-reclaiming system utilizing blow steam for heating washer water. Complete instrumentation is provided for producing uniform pulp from automatic cooks. Cooking cycles vary to provide optimum conditions according to the wood species concerned.

A Ross & Howard agitator provides agitation in the blow tank from which stock discharges at 2.75% consistency.

3-Stage Washing

A Canadian Allis-Chalmers 4450 gpm 130-ft. head controllable-volume pump delivers it to a group of five Jonsson knotters. Accept stock progresses from knotters to a three-stage counter-current 11¾ x 20 ft. Impco (Sherbrooke Machineries) washer which utilizes fresh water heated by the blow steam.

Instrument consoles and panels in the washer room control processing ranging from blow tank to washer discharge; also controlling flow of wash water and black liquor. Excepting the batch cooking, operation is continuous —including pulping, washing, screening, bleaching and drying.

Washed stock from the three-stage brownstock washers is delivered at high-density to any of three Canadian Stebbins Semtile storage towers having combined capacity of 120 tons. Each tower is reserved for separate species storage—Douglas fir, hemlock or cedar. Withdrawn from the towers by mining nozzles, high-density Canadian Allis-Chalmers pumps deliver the stock to a tile-lined mixing chest via magnetic flow meter and DeZurik consistency regulator. Instrumentation gives controlled blending of species.

Screening System

Uniform low consistency stock is pumped from this chest to the brownstock screening system consisting of three primary Mark A and one secondary Mark E Cowan screens supplied by S. W. Hooper & Co.

Rejects from the secondary screen are refined in a Sprout-Waldron refiner and returned to the secondary screen for recycling. Accepts from the primary screens flow directly to a 11½ x 20-ft. Sherbrooke washing decker equipped with stainless-lined stock vat and stainless trim. Secondary accepts go to the decker via five large Bauer Centricleaner units. Deckered stock discharges, at consistencies up to 5%, to a tile-lined decker chest.

This unbleached pulp is pumped at controlled consistency and volume to the first bleach stage.

Versatile Bleach Plant At Crofton Is Laid Out in an Unusual Manner

The Crofton bleach plant presents an unusual appearance. All six of the 80 to 84½-ft. high steel, tile-lined Kamyr-design bleach towers are located outside the pulping group building, with mechanical equipment and washers inside the building.

This six-stage bleaching system includes:

1. Chlorination stage—low density, upward flow with external chlorine pre-mixer, stock washed at 14% consistency;
2. Caustic extraction stage—high-density, downward flow, stock heated with direct steam and mixed with caustic, the stock removed at 3% and washed;
3. Hypochlorite stage—similar to previous stage;
4. Chlorine dioxide stage—high-density, upward flow, using a mixer-agitator which forces stock into tower bottom in doughnut pattern; stock scraped off at top;
5. Caustic extraction stage—high-density, downward flow;
6. Chlorine dioxide (second)—high-density, upward flow, tower and equipment same as fourth stage.

The bleachery, consisting of six towers and six 11½ x 20-ft. Sherbrooke washers (with stainless drums, tile vats, fiberglass fume hoods), is piped so that other sequences than that given above may be used to meet market requirements. All mixers, piping, valves, pumps and miscellaneous equipment are of stainless 304, 316 or 317, depending on service.

Bleach Chemical Preparation

Hooker Chemicals, Ltd., handled technical service work in conjunction with chlorine, caustic and hypochlorite. Electric Reduction Co. handled the sodium chlorate and chlorine dioxide service.

Hypochlorite liquor is made in a Hooker continuous automatic system from chlorine gas and milk of lime. Two Olin Mathieson Chemical Corp.—design units, with secondary generators and scrubbers, generate the chlorine dioxide. The gas is absorbed in two U.S. Stoneware packed columns, the water solution stored in brick-lined steel tanks. Sufficient capacity has been installed to provide a continuous supply of solution and eliminate the possibility of brightness variation. Depending on service, equipment in the generating plant is chemical stoneware, acid resisting brick, polyvinyl resin, saran-lined steel or lead.

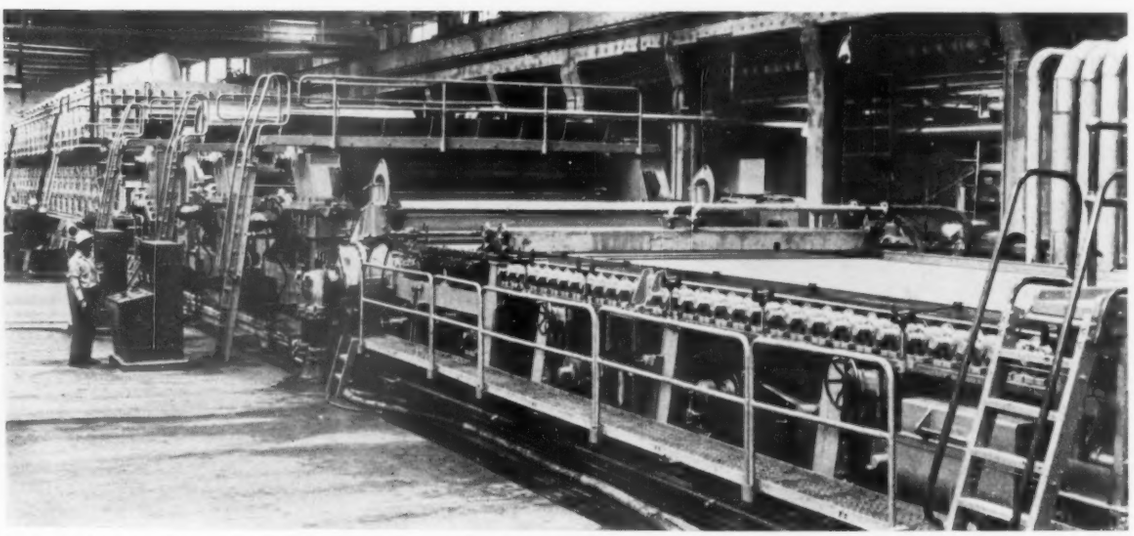
Knapp Mills, Inc. supplied the ClO_2 generator. Lundberg-Allen Co. provided the SO_2 system and jet-type sulfur burner plant.

Other Operations Near By

The bleachery floor includes the brownstock washers, unbleached and bleached screen rooms. Cowan screens and Bauer Centricleaners were placed here in the process flow for minimum pipe runs. Instrument panels and control consoles facilitate remote operation by minimum size crew. Screen rooms and bleacher instrumentation provide rigid control of each process for producing pulp of 85 to 90% (Pulp & Paper Institute) brightness.

Bleached stock from the final washer goes to three Stebbins Semtile 40-ton high-density storage towers—duplicates of the unbleached storage towers except that blending control instrumentation is not included.

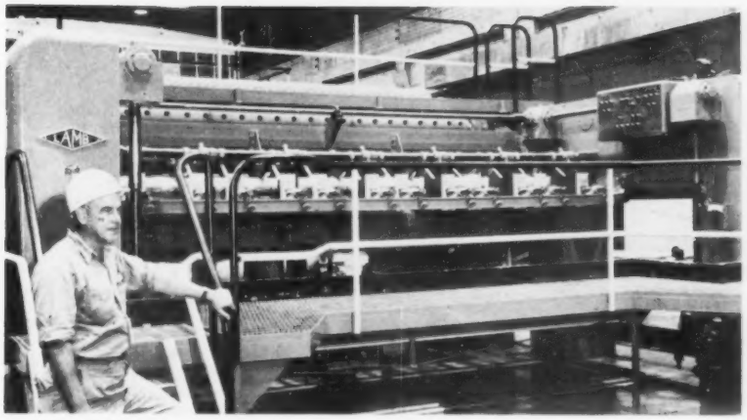
Bleached stock from high-density storage towers is processed with three Cowan screens arranged as primary and secondary. The accepted stock is cleaned in a battery of 1,005 Bauer Centricleaners, the stock subsequently thickened on a 11½ x 20-ft. valveless, stainless decker. Stebbins Engineering lined the screen room's stock and whitewater chests.



WORLD'S LARGEST MINTON DRYER is on this 178-in. Dominion Engineering machine, with weir boxes over Fourdrinier wire to apply hot water, oscillating suction boxes, Evans Rotabelt and breast roll on wet end.

Mammoth Machine Dries Pulp at Rate Of 550 fpm for 300 lb. Basic Weight

Blending capacity at the Crofton mill—in the form of storage towers, decker chests, screen chests, mixing chests, and 25-ton blending chest—



AUTOMATIC FINISHING . . . Lamb-Grays Harbor cutter-layboy slits and cuts sheet from Minton dryer to be delivered by Lamb transport to either of two Washington Iron Works 1,000-ton hydraulic baling presses.

coupled with controlled mixing of wood species, ensures uniformity of production day in and day out.

The blending tank, adjacent to the chemical storage section and ahead of the machine, provides for storage and blending of 3% stock. Pumped from here, it goes to one of the plant's 10 DeZurick consistency regulators, through a headbox and basis weight control valve to the machine's open-flow type headbox.

Machine Designed for 550 fpm

The Dominion Engineering machine, with 178-in. x 95-ft. long wire operating on fixed, non-shaking, non-removable Fourdrinier, has design capacity for producing basis weight of about 300 lbs. at 550 fpm. Wet end equipment includes 33 rubber covered 7-in. diameter table rolls, four oscillating flat suction boxes, a variable location suction box, and Evans Rotabelt, and breast roll. Two adjustable weir boxes installed over the wire facilitate application of hot water to the sheet to decrease viscosity and improve drainage. A dandy roll follows the final suction box.

The press section has two suction presses and one plain third press with a pre-dryer between second and third presses. These presses are respectively designed for maximum nip pressures of 500, 500, 1,500, respectively.

The sheet passes over a Toledo basis weight control scale and on to the dryer at a minimum of 43% a.d. at speeds up to 550 fpm.

World's Biggest Minton Dryer

The Minton type dryer, second in Western Canada, is the world's largest. It has 68 60-in. diam. x 174-in. cylinders. Two top and two bottom felts are used on the machine. Capacity is a comfortably attained 500 tons of pulp per day.

A Canadian Ingersoll Rand vacuum system operates in conjunction with the Minton dryer which was designed for using 29-29-in. vacuum and to dry in excess of 500 tons daily to 100% a.d.

CROFTON

The vacuum chamber, constructed of heavy cast iron plates and air-tight joints, has aluminum-framed windows at each dryer roll for observing the sheet. Doors have been provided for removing broke; six outlets installed in the roof facilitate exhausting vapors. The chamber is equipped with a lighting system and a sheet-break alarm system which indicates location of breaks by means of flashing lights.

A Harland electric sectional drive, supplied by Bepco Can. Ltd., drives the entire machine. The dryer, driven in two sections, can be operated with or without connecting idler gear.

The sheet enters and leaves the dryer chamber through seal rolls to prevent vacuum lossage.

Sheet Finishing and Baling

The dry pulp sheet emerging from the Minton unit is slit and cut for baling by a Lamb-Grays Harbor cutter-layboy and handling system taking the bleached kraft to either of two 1,000-ton hydraulic baling presses built by Washington Iron Works. These units form the sheet pulp into compact 17 x 30 x 35-in., 500-lb. bales which are wrapped and manually or automatically tied with Tennant Development wire-tying machines and subsequently transported to another Lamb-Grays Harbor installation for stacking and weighing preparatory to palletized storing or shipping.

Handling of bales from the stacker to 8,000-ton capacity storage warehouse, and from storage or direct from stacker to enclosed rail cars, is by propane-fueled Towmotor lift trucks. The system makes for such clean handling that even the wrappers are suitable for repulping. One operator, under this arrangement, loads a 50-ton rail car in approximately 20 minutes.

Recovery and Chemical Makeup Plants Feature Convenient Control Systems

At the Crofton, B.C., kraft mill, strong liquor from brown stock washers passes through two British Columbia Research Council-developed oxidation towers, en route to black liquor storage tanks. These towers oxidize much of the unsaturated components in the liquor and facilitate the evaporation stage. This pioneering work in British Columbia was independent of similar developments by Weyerhaeuser and in Italy by Vita Mayer & Co.

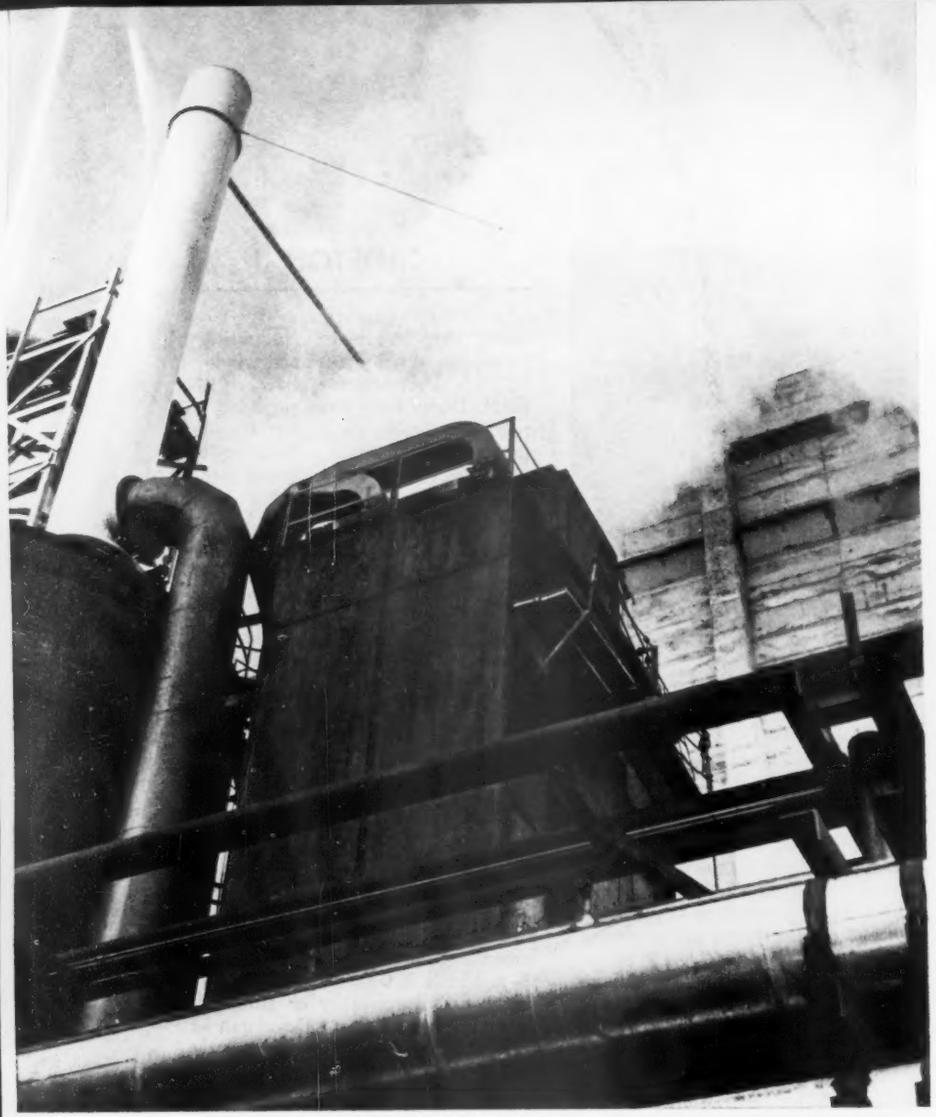
Dr. R. H. Wright of the B. C. Research Council, told PULP & PAPER:

"The black liquor oxidation and odor retention system at Crofton operates on the same general principles as in other Council-designed installations, of which seven are currently in operation or under construction.

"Black liquor oxidation is used to reduce the tendency of the evaporators and recovery furnace to emit odors, and in addition the oxidation process is used to absorb and retain the malodorous constituents of the blow gases by mixing them with the air supplied to the tower. Concurrent flow of air and black liquor insures a nearly complete absorption of these gases, and a very high ratio of air to black liquor enables them to be handled as they come and without intermediate storage in gasometers or vapor spheres.

New Features at Crofton . . .

"The oxidation tower at Crofton embodies several new constructional features," said Dr. Wright. "A new type of packing combined reduced



REDUCING ODOR AT CROFTON MILL by passing gasses and spent liquor through two British Columbia Research Council oxidation towers to convert odor-causing compounds to sulfates.

weight with increased surface area, and the exhaust duct has been given a very large cross-sectional area to reduce the gas velocity and cut down black liquor entrainment. In this way the over-all pressure drop is minimized, and entrainment separators are wholly eliminated."

The Crofton towers are different from some others in use in Canada and U.S.A. A Crofton difference is a new type of backing said to provide both lighter weight and greater contact surface, so more oxidation per cu. ft. results. To avoid entrainment of black liquor in exhaust gases, the twin towers, with access galley between, are walled in to provide a single exhaust stack.

One of the largest black liquor evaporators in the world was erected by the Chicago Bridge & Iron Co. subsidiary, Horton Steel Works Ltd., for Crofton. This is a sextuple effect unit designed by the Conkey division of Chicago Bridge, which hourly converts 500,000 lbs. of 15% weak black liquor to 52% total solids by evaporating 356,000 lbs. of water. The first effect is divided into two sections—1A and 1B—which is desirable in a big unit. The reason for this is to give better coefficients of heat transfer.

The complete evaporator unit includes a surface condenser; flash tanks; vapor, liquor, condensate and gas piping; control equipment; liquor and condensate pumps for transfer of fluids through the evaporator.

An indirect surface condenser, on the sixth effect, generates hot water for the pulp mill washer showers. Further to conserve heat, all contaminated condensate is utilized. Liquor pumps and strong liquor lines subject to severe corrosion are of stainless steel. First and second effect evaporator heads are stainless clad and first effect tubes and tube sheets are of stainless type 304 to minimize corrosion.

Foxboro evaporator controls measure steam flow, liquor flow, steam, liquor and vapor temperatures and the boiling point elevation of strong liquor. All temperature and pressure variables are indicated and recorded on a convenient panel from which the evaporator may also be operated and data obtained. This aids the chemical engineer who wants to obtain all this data at one time, at point of operation.

James Mair, Chicago Bridge's chemical engineer who has helped design and start up many evaporators all over the world, was on hand for the Crofton startup, and he reported this unit went into operation with a minimum of trouble.

Big Combustion Boiler . . .

The large Combustion Engineering recovery boiler has capacity for 1,600,000 lbs. of solids per 24 hrs., generating steam at 625 psi and 750° F. The unit has straight through gas blow, a platen type superheater and slag screen. Steam soot blowers keep the tubes clean with only occasional hand lancing. Two series-connected cascade evaporators, one elevated above the other, concentrate black liquor to 64-72% dry solids which is mixed with salt cake and pumped by DeLaval pumps to 10 spray nozzles located on four sides of the furnace.

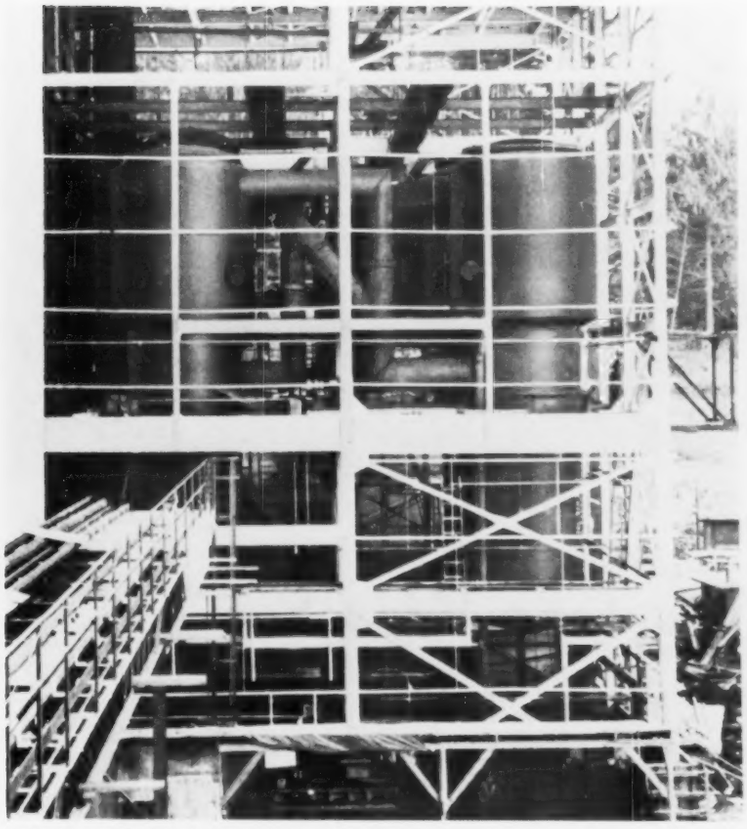
Instruments, mostly provided by Bailey Meter Co., provide nearly complete automatic control of furnace operation. The density of the strong black liquor from the cascades is measured by electrical load variations, dilutions automatically added as required; a Foxboro magnetic flow meter measures liquid flow to the nozzles; total air flow, primary and tangential airflow are individually recorded and controlled. Furnace flue gas is analyzed for combustibles and O_2, this combination of fuel flow, air flow and flue gas quality facilitating almost automatic operation. All recorders and controls are centrally located on the boiler panel board.

Koppers Precipitator . . .

A Koppers two-chamber three-cell electrostatic precipitator, of tile and concrete construction with flat steel bottom, treats recovery boiler flue gases. This unit has capacity of 192,000 cfm at 95% efficiency with two cells in operation, 98% with three cells. Rectifiers are electronic with automatic voltage control. Extra care was taken in the sizing of the precipitator to prevent dust problems.

Collected ash, recovered from the flat bottom by a drag conveyor, is dissolved in 52% solids black liquor which is then pumped to the cascade evaporators. Flue gases are drawn through the precipitator by a turbine driven induced draft fan, the cleaned gas discharged to a 250 ft. brick-lined stack built by Custodis Co.

Two Foster-Wheeler semi-outdoor



ONE OF BIGGEST is this Conkey black liquor evaporator at Crofton, designed by Chicago Bridge & Iron Co. (Picture was taken before it was housed in.)

two-drum baffleless steam generating units provide steam supplementing the recovery boiler. Each F-W unit has capacity to produce 200,000 lbs. per hour at 625 psig and 750° F. when burning oil. Grate bottoms and pneumatic fuel distributors are provided for burning straight hog fuel or burning it in combination with oil. Each boiler has a cinder recovery system, with reinjection to the furnace, to eliminate fly ash emission, and steam-operated soot blowers.

The boiler units are housed in the same structure as the recovery boiler so a single shift engineer supervises operations. The induced draft fans, located outside the building, discharge clean flue gases to the same stock that serves the recovery boiler.

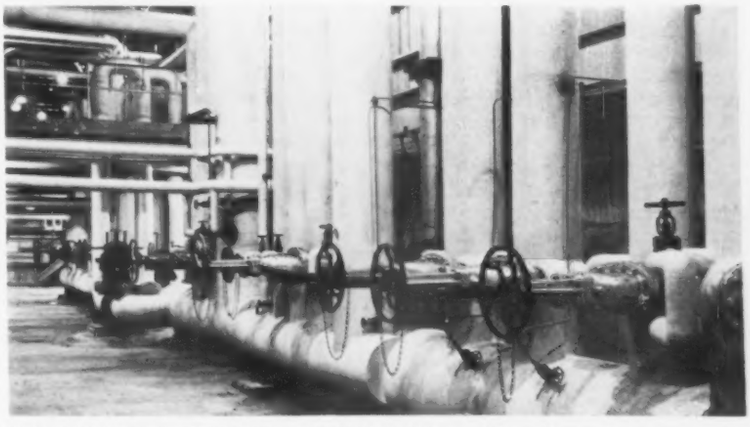
The boiler feed water consists of returned condensate and about 20% raw water makeup. Raw water is treated in a Permutit demineralizing plant consisting of two anion and two cation units which produce a water of 3 ppm total solids maximum including a maximum of 0.1 ppm silica. This safeguards the boiler against tube scaling and other types of trouble attributable to feed water. Treated water flows to a hot well, there combining with returned condensate, then pumped to a Permutit deaerating heater of 500,000 lbs. per hour water capacity. Individual Bingham turbine-driven pumps of stainless steel construction deliver deaerated water to any of the three boilers. Automatic instrument control is provided for the whole feed water cycle.

Recausticizing

Green liquor from the dissolving tank is causticized in a standard Dorr-Oliver plant. Foxboro instrument control is used to a high degree, the slaking operation controlled by green liquor flow, hot reburned lime flow proportioned to the liquor, and temperature controlled. All instruments and controls are centralized in a panel located in the operator's control station and laboratory.

Mud from the storage tank is dewatered to 70% solids on a Dorr-Oliver 6 ft. diam. x 10 ft. mud filter of stainless and meehanite cast iron construction. A screw conveyor feeds the mud to a Traylor 10 ft. diam. x 250 ft. long lime kiln. Oil flow is controlled through a radiation pyrometer measuring heat of the hot zone. The kiln flue gases are cleaned in a spray chamber and stainless Peabody scrubber, resulting in stack gas free of entrained lime and soda fumes.

Hot lime produced is stored in a silo fed by a totally enclosed dust-tight bucket elevator. The kiln operator controls the lime slaker which provides slaked lime for the bleach plant; the other slaker being tied into the Dorr system. The causticizing system produces white liquor at the rate of 15,500 lbs. of active soda (NA_2O) per hour with a minimum of operating and maintenance labor.



BIG STEAM HEADER UNIT AT CROFTON . . . like other units at new pulp mill, this steam header unit is extensive. The header and valves were supplied by the Crane Co.

ONE AND ONE-HALF MILES FROM MILL, this elaborate high volume plant . . .

Supplies Trouble-Free Water

to a "thirsty infant" Crofton, B.C., Mill which soon will "cry" for more pure H_2O, required for making quality pulps

The quantity required is so large, quality so highly exacting, and a continuous supply so essential that even on the rain-washed slopes of Vancouver Island, provision for adequate supply for the new B.C. Forest Products bleached kraft pulp mill at Crofton necessitated an undertaking of major proportions.

Design specifications for the 500-ton/day pulp mill call for 70,000 gals. of water per ton of pulp—35 gals. for one pound of pulp. Consequently, production at the mill's rated capacity requires 35 million gals. daily. Water used in making bleached pulp requires stricter standards than are necessary for drinking water.

As one hydraulics engineer points out concerning the Crofton mill, "This thirsty infant gulps down enough water every minute, day and night, to fill a backyard swimming pool, and before long it will be crying for more."

Besides volume requirements, this water must be crystal clear—without color or turbidity; should be low in hardness, and must be low in iron and manganese content.

To provide a system supplying the mill with this sort and quantity of water required four construction phases. One concerned building a weir and boat lock some 30 miles away at the outlet of Cowichan Lake to increase impounded storage in the lake. Another was the erection of a pumphouse 20 miles downstream from the weir on the Cowichan River down which all the water for the mill flows. The other two phases concerned installing nearly 10 miles of 48-in. diam. pipe to transport the water from pumps to mill and the erection of a water treatment plant about 1½ miles from the mill.

A dam-like structure, built of timber cribbing, rock-fill, sheet piling and a concrete boat lock, was erected to hold an additional 32,000 acre-feet of water in the lake—enough to fill needs of the mill, the nearby city of Duncan, the salmon and steelhead runs and still have water to spare for other industry. Facilities were incorporated into the structure for passing small boats and migrating fish. Both also benefit from the resultant sustained, even river flow.

Instead of pumping directly to the mill, five Byron Jackson pumps—each of 5,700 gpm (U.S.) capacity at 250-ft. head—pump water from the river to a surge tower located 232 ft. above the pumping source. This pump battery can deliver 41 million gals. per day now and provisions have been made for installing up to two more such units, when needed, which would increase daily capacity to as much as 57.5 million gals.

New Concrete Pipe is Used

The pipe used to transport water from the pumps to surge tower, to treatment plant, and from treatment plant to the mill, is something new to industry in Western Canada. This pipe, 50,432 ft. of it, is 48-in. inside diameter. Known as American concrete cylinder pipe, it was made at American Pipe & Construction Co's. Portland, Ore., plant in accordance with design specifications laid down by Simons engineers for the Crofton installation.

Designed for internal working pressure of 100 psi, this pipe consists of a steel cylinder inside of which is a ¾-in. thick, smooth concrete lining; steel reinforcing rod, spirally tension-wound at approximately 2-in. center-to-center spacing on the outside of the cylinder, is covered with an equally thick layer of concrete. This construction ensures long-life expectancy and the upmost in pumping economy owing to the system's continued high carrying capacity.

LAYING NEARLY 10 MILES of 48-in. diameter concrete-steel cylinder pipe especially built for Crofton mill by American Pipe & Construction Co., first to be installed in the British Columbia industry.

"We wanted this vital link in mill operations safely underground, away from possible fire, falling tree or vandalism damage," George Fletcher, vice president of H. A. Simons, Ltd., told PULP & PAPER, "A long cross-country millwater supply line such as this must be thoroughly dependable for many, many years to come."

No Attendants at Filter Plant . . .

To capitalize on the maximum advantages of local natural conditions for gravity flow to the mill, it was expedient to locate the filter plant approximately 1½ miles from the mill site, 8 pipeline miles from pumping station. Such location would conventionally necessitate filter plant operators for all shifts. Instead, it operates with no routine attendants. Northwest Filter Co. designed the 35 mgd installation for complete treatment and filtration with all operations to be performed automatically.

Constant level in the surge tower is maintained by automatic cutting in and out of pumps as required by filter plant demand. Raw water enters the plant through a metering venturi and control valve automatically regulated in response to plant demand. Instruments installed at this point generate a pneumatic signal which automatically proportions chemical feed components over the entire flow range. This signal is also transmitted to the main control panel and there recorded in terms of plant flow.

Chemical Treatment . . .

Chemical solutions are injected into the raw water line immediately downstream from the venturi. These normally consist of chlorine and alum solutions but soda ash can be added for pH control when needed. The plant design eliminates any need for use of coagulant aids.

The chemically treated water goes through a three-stage mixing section for thorough chemical dispersal and distribution. Following the last mixing stage comes a series of coagulation chambers in which "floc" forms. This entire process is performed hydraulically without use of mechanical or moving parts.

Water containing fully formed floc is evenly distributed into two settling basins for eliminating the bulk of these undesirables.

Mixing, coagulating and settling sections of the plant were specially designed by Northwest Filter, based on laboratory analyses and tests, to meet the needs of this specific water.

Twelve conventional sand bed gravity filters "polish" the settling basin effluent. Although these filters have flow rates considerably higher than standard, runs exceeding 12 hours before backwashing are possible.

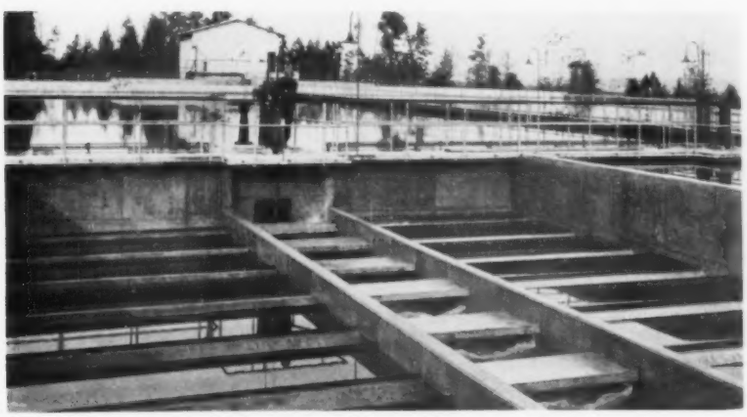
How System is Controlled . . .

The filters were "paired" into six units for simplicity of control and to reduce initial cost. Each of the six is individually controlled but all may be controlled from a central station for automatic operation. However, the control circuits are designed so that only one side of each filter pair is backwashed at a time. This arrangement makes for smaller backwash pump capacity and reduced demand on the clearwell for backwash water.

Plant control is on a demand basis, all of the units responding to the mill's water demands. At full rated flow of 35 mgd all filters can be automatically backwashed in sequence and still maintain rated output. Control of each filter unit is designed to balance the load with all other units. A unit returns to the line following backwashing filters at a rate up to a predetermined maximum depending on plant demand, thus assuring equal filtering by each unit.

The plant's basic pneumatic control system governs basin and clearwell levels, chemical feed proportioning and filter rates. Besides, it automatically monitors loss of head through filter beds irrespective of flow rate. At pre-determined settling the backwash cycle starts, initiation of which establishes electrical interlock of the units.

During the entire backwashing operation a single failure of any component puts an "interlock" alarm into effect and halts the cycle. This alarm alerts personnel at the mill so corrective action may be taken immediately. Various other alarms, including "high" basin and "low" clearwell, are also a part of the monitoring system.



ONE OF SIX FILTER PAIRS in Northwest Filter plant controlled by instruments from central station. These have high flow rate, can run in excess of 60 hrs. before backwashing, maintain rated flow backwash sequence.

New Uses—For That Spare Capacity

Aluminum-Paper Foil Is New Alcoa Product

Laminated aluminum-paper foil, a new product of Aluminum Co. of America is being shipped to insulation, printing and packaging industries from Alcoa's Davenport (Ia.) works. For the first time, Alcoa now is equipped to provide foil, bonded to paper, in widths up to 54 inches.

Alcoa is prepared to laminate foil from .00025 to .001 in. thick, to paper of any weight, or to paperboard. All kinds of coatings, adhesives and paper used in the laminating process are available to customer specifications.

Aluminum foil sales in this country expected to climb to 300 or 400-million pounds annually over the next five to six years, says J. S. Hamilton, Alcoa's manager of foil sales. He said new uses are being discovered almost every day.

New Metalized Paper

Shellmar-Betner division of Continental Can Co. has developed a new metalized paper similar to tin foil which "is cheaper than foil and easier to handle," says Ray Schink, general manager of the division.

The new material is produced by applying vaporized aluminum to paper and results in a shiny surface.

Cartons Replace Wood Boxes

Black-Clawson Co.'s Shartle division is now shipping jordan fillings and plug bars in corrugated fiber containers instead of wooden boxes.

It learned that the lighter cartons can be handled more easily and more safely. Fillings and bars are better protected, stay clean and dry. Storing, inventory checking and unpacking are facilitated.

"Promising" New Paper Uses

Listed by new National Paper Trade Assn. president, Ralph Schnitzer, (also pres. of Magnolia Paper Co., Houston, Tex.):

Paper reinforced with glass yarn to hold back wet concrete.

Paper tubes for pouring concrete columns.

Paper tubes for heat channels in concrete slabs.

Fungicide-treated papers for construction.

Bags for controlling plant pollination.

Papers for germinating of seeds.

Let's Get Going!

Scores of speakers at industry meetings during the current leveling off or recession period emphasize the need for discovering new uses and markets for pulp, paper and paperboard.

Leaders of associations, presidents of companies, economists and others repeatedly say that major efforts must be bent to invent these new uses in order to take up the slack in capacity. They warn of the increasingly vigorous competition to paper in aluminum, glass, wood and plastics fields.

PULP & PAPER publishes this New Uses section in the hope it will stimulate industry operators, engineers and technicians to increase their efforts to invent more and more new uses.

Now . . . Room-sized "Gas Mask"

Wood fiber, a second cousin to pulp, has been developed into an effective "gas mask shelter" at the U. S. Forest Products Laboratory in Madison, Wis. The new product was seen there on a recent trip by PULP & PAPER.

The cheap building board filters poison gas, disease-laden particles and the radioactive fall-out of atomic explosions from the atmosphere. It was effectively developed through combined efforts of the Madison laboratory and the Army Chemical Corps.

With this material, shelters can be built to protect troops and civilians from some of the most deadly effects of modern war, according to Dr. J. A. Hall, laboratory director.

Called "diffusion board" it is now being extensively tested by both the lab and the Army Chemical Center in Maryland. Said Maj. Gen. W. M. Creasy, chief of the Army Chemical Corps: "It will put protection within everyone's reach when it becomes available."

Its developers, Drs. Alfred J. Stamm, veteran research scientist at the laboratory, and Harold Tarkow, his assistant, said diffusion board looks much like ordinary building fiberboards used in house construction. Secret chemicals, they said, screen out deadly gases and particles while life-sustaining oxygen passes through. Carbon dioxide, poisonous gas given off by breathing, passes back through it to the outside.

Woodpulp Propels Rockets Into Outer Space

A new use for chemical cellulose is helping to propel rockets into outer space.

This was revealed by M. Wyman, technical director, Columbia Cellulose Co., Ltd., Prince Rupert, B.C., Celanese Corp. subsidiary, in a talk before the recent Canada-U.S. Chemical Engineering Conference in Montreal.

He cited uses of wood cellulose as an ice cream ingredient, and said it has been "quite successful" in displacing cotton in cellulose acetate film, triacetate yarn, photographic film and molded and extruded plastics. The best commercial celluloses from wood are now only 97.5% alpha cellulose, but when the last traces of unwanted carbohydrates and resins are removed, more uses will be possible, he indicated.

Paperboard has Won Another Market!

Albany Felt Co. has started shipping about 70% of its paper machine felts in a new patented, steel-strapped corrugated container.

It takes the place of an old-fashioned burlap wrapper.

This followed a one-year test. The new container provides better protection in transit, allows easier storing, better handling and better mothproofing. If unbroken, it is practically 100% mothproof. If felt is removed and repacked, napthalene flakes should be added.

Army Goes for Paper Sandbags

A knitted and chemically treated paper sandbag is replacing burlap in U.S. Army Engineer Research tests at Fort Belvoir, Fla. Both wet and dry, the paper is proving as good or better. It has survived 60 days of most severe weather, resists shock effects of a close blast at least as well, and has comparable service life in water.

Votes for Paper-Plastic Bushings

Paper-plastic bushings made of a paper base phenolic resin do not score steel arbors, cost less than other "soft" bushings of plastic, aluminum, etc., says Taylor Fibre Co. Heats used in curing abrasive wheels do not damage bushings.

Knitted Paper is Here But . . . Where to Use It

A new process, knitted paper, is described as having good potential uses by its inventor, Ronald H. Marks, president of Enterprise Inc. His company sells some 500 different products to the meat packing industry and does a substantial seven figure gross sales yearly.

Looking around for something no one else had, he conceived a process to manufacture seamless knitted paper-mesh tubing. One immediate use: Pap-O-Net, a ham bag made from specially developed paper yarn with extraordinary strength and knit with a wide mesh. Results: Better smoke penetration and improved smoked flavor.

Texan-born Mr. Marks, not being in the paper industry, has embarked on a personal campaign to sell his invention to this industry.

Mr. Marks' invention covers the product, not the machinery. Patent No. 2,721,462, issued Oct. 25, 1955, Canadian Patent No. 528,996 and other patents pending, are for a new development for the use of paper, knitted in seamless circular, tubular form of paper strands.

Corrugated Containers Give Batteries a Fresh Start

For shipment of batteries ranging in weight from 50 to 1200 lbs., one of the world's principal industrial battery manufacturers has switched from wood to corrugated packaging. Electric Storage Battery Co.'s Exide Industrial Division reports—after a seven months' test in its seven plants throughout the country—that its new corrugated shipping containers have:

1. Assured undamaged delivery of shipments of glass, plastic and hard rubber cell batteries.
2. Cut unpacking time to a matter of seconds.
3. Reduced freight charges by saving an average of 15 lbs. per shipping container.
4. Promoted company and product by advertising on each container—"A Quality Exide Battery."

New Taste in Paper Cups

A patent applied for by William H. Shofi, 254-05-73rd Road, Glen Oaks Village, L.I., N.Y., calls for an impregnation of artificial coffee, tea, or chocolate flavor in the fiber, or in the resinated or plastic coating to be used in conjunction with a color similar to the liquid to be used, such as (coffee) shade for coffee, (orange-yellow) for tea, and (brown) for chocolate.

New Paper Covering for Luggage

Thilmany Pulp & Paper Co. has crashed through with a new paper use—already in commercial stage. Its "texturized" Poly Kraft now covers luggage for Neevel Mfg. Co. of Kansas City.

The base paper is rotogravure-decorated, then poly-coated, and finally embossed to give the "texturized" surface, and this is all done at Kaukauna, Wis. Replacing vinyl, this paper has greater water resistance, high scuff resistance and costs less.

Paper Teams with Water, Cut Costs of Test Firings

Made of paper and water, a new artillery projectile has been developed by the U.S. Army to provide an inexpensive shell for test firing.

Presently made for the 105-mm howitzer, the new shell costs about $1. This compares with the $10 cost of the conventional metal projectile. Its weight and resistance to the expansion of the propellant gases make it possible to test operation of the howitzer's recoil system.

The howitzer using the shell may be fired where the range is only a matter of 100 ft. or so, for the muzzle blasts forth only water and bits of paper.

Consisting of two wax-impregnated, kraft paper tubes, each 4 in. diameter and 42 in. long, the shell resembles elongated ice cream containers. The ends of the tubes are sealed with three ¾ in. cardboard discs.

Filled with water just before firing—and through a ¾ in. hole in the forward end which is then enclosed with a cork—the projectile is loaded into the gun's muzzle instead of the breech. Standard rounds are loaded into the breech. The water spray from the projectile is harmless, but the cardboard end closures may damage targets at a distance of 75 ft. At 125 ft. there is almost safety against flying particles of flying cardboard.

New Container for Apples

A new shipping container that gives carton-packed apples proper ventilation as well as visibility for market buying has been developed by Mark Royce of the Robert Gair Division, Continental Can Co. The container requires less board than previous packaging, holds 16 Alford Fanci-Pak cartons and can be easily made into a display.

The container is a one-piece, wrap-around construction without sidewalls. Before filling, flaps of the top, bottom and end panels are stapled together at one side and the container is filled quickly and easily from the opposite side. Remaining flaps are stapled and the container is ready for shipment.

On arrival at the retail outlet, one end panel of the container can be opened like a hinged cover by slitting the top section of the side panels diagonally. The container then becomes a display stand.

NEW PAPER USE . . . Betty Wettstein, who works in the filing dept., Thilmany Pulp & Paper Co., carries luggage here covered with "texturized" Poly-Kraft paper made by Thilmany at Kaukauna, Wis. Papermaking know-how thus has come through with a new paper use—the kind of resourcefulness the industry needs now with over-capacities.

But Look Out— Here's a Competitor

One of the aluminum companies is doing a lot of work on development of an aluminum package for cigarets. It has high hopes, claims many advantages. Paper and cellophane made from wood pulp are now universally used to package cigarets.

MUD IN YOUR EYE . . . or almost as high as it, in some places, can be seen in this picture of the new machine room at St. Francisville, La. Bad weather has held Crown's operation back a bit but plans still call for Beloit machine to be in production by Feb. 1959.

Builders of Revolutionary Mill

are fast becoming transplanted Rebels, as they shoot for January target for a two-coater machine in Louisiana

By WILLIAM F. DIEHL JR.
Southern Editor, PULP & PAPER

—St. Francisville, La.

● A growing force of Crown Zellerbach West Coast men are gradually becoming transplanted Rebels in this southern land of bayous.

Meanwhile, the men from the tall timber country are finding out that while rain and Louisiana clay mix very well, they don't always mix well with time schedules and construction equipment.

Nonetheless, work on Crown and Time Inc.'s big coated paper mill, eight miles south of this small crossroads town and a little over 20 miles north of Baton Rouge, is pushing ahead. Target date now for start-up of the impressive-sounding machine is early 1959, probably late January or early February.

Meanwhile there is, among the steadily growing staff here, an almost indescribable atmosphere of excitement and anticipation. Watching a modern paper giant grow to size is a thrilling experience and even those "old timers" who have fought elements and time schedules before to bring a mill on-stream never seem to lose this enthusiasm.

"For a while," one Far West engineer said, "it doesn't seem like you'll ever get going. Then one day you've got a building up. Then you seem to be over the hump. It's rough going, but at least you can see things happening."

Things are still in the "pioneering" stage here but the modern, redwood administration office has been completed and the staff is beginning to move in. The phone system is a bit archaic (crank three times and give your number) and the "lunchroom" is the trunk of a blue sedan—which carries sandwiches and drinks from the St. Francisville Cafe every day at noontime. The restaurant closes shop

POINTING TO THE FUTURE . . . Ed Nunn (center), res. mgr. of Crown-Zellerbach, Time Inc. mill looks over the machine building with Purchasing supt. Dick Loyst (left) and office mgr. Ray Walker (right). All three are west coast veterans with Crown. New, modernistic office building, now complete, is in back.

for an hour and opens up at the mill from its makeshift lunch counter.

From the Coast . . .

Ed Nunn, former resident manager at Crown's Carthage, N.Y., mill and onetime asst. mgr. at West Linn, Ore., has already taken over as manager of the new Louisiana mill. With him are Dick Loyst, Korean War veteran and youthful veteran from Carthage and Port Angeles, Wash., who is purchasing supervisor, and Ray Walker, who comes to the South as office mgr. from West Linn, Ore., where he was asst. office mgr.

In charge of construction at the scene is Lee Mayback, a 20-year veteran at Camas, Wash., who likewise was chief engineer on construction, then plant engineer, at the recently built Antioch, Calif., mill. On his staff of engineers are O. N. Ellman, Jr., project engineer, who works out of Crown's Central Engineering Office in Seattle; Oscar Frasier, asst. project engineer, who worked with Mr. Mayback at both Camas and Antioch; B. C. Collins, out of Seattle, who is in charge of structural design; N. M. Babington, formerly of Crown's Gaylord div. at Bogalus, La., and now in charge of equipment and materials handling here, and Andrew Erickson, supervisor of building costs and until recently a member of the U.S. Air Force.

Later this year, Robert Plankinton, recently moved from asst. sulfite supt., CZ, West Linn, Ore., to central research, Camas, Wash., will join the staff at St. Francisville as technical supervisor.

Likewise, H. M. (Bud) Lyle, recently transferred from asst. to paper mill supt., West Linn, to central research, will go to the Louisiana mill as coating supt.

West Linn was the first mill to coat paper on the machine in the Far West, using the Consolidated letterpress method invented by the late Pete Massey and is one of the nation's biggest producers of high speed letterpress coated paper.

CROWN'S ENGINEERING STAFF in Louisiana looks on as construction engineer Lee Mayback, 20-year Crown veteran, goes over blueprints. From left, they are proj. engr. O. N. Ellman, Jr.; Mr. Mayback; Oscar Frasier, asst. proj. engr.; Andrew Erickson, Air Force veteran and building cost supervisor; B. C. Collins, from Seattle Crown operations, in charge of structural design of new mill.

A Revolutionary Machine . . .

"Basically," Mr. Mayback told PULP & PAPER's Southern Editor, "this mill is very similar to Antioch, even though Antioch is a brown stock mill. I would say the most exciting thing about it will be the machine. We will be coating both sides of the sheet twice on the machine. I think that's pretty new."

The 264-in. Beloit machine will have two coaters and perhaps the longest Fourdrinier wire in operation —130 feet. Designed for 2,000 fpm, it will be driven, through Beloit differential drive, by a 2600 hp steam turbine. Appleton Machine Co. is building the world's largest supercalender for this mill.

Also interesting is the mill's general construction, which is not unlike the recent CZ construction at St. Helens, Ore., and Antioch, Calif. It will be structural steel and precast concrete panels which will be bolted in place and can be moved in the event of future expansion. Layoutwise, the mill has been designed to provide for future growth on both the groundwood and paper ends. Stainless steel is being used extensively throughout the mill wherever lines carry stock, white water or corrosive materials. All storage chests will be precast concrete with Stebbins tile linings.

The mill's startup capacity will be roughly 200 tons a day, of which 100 tons is committed to Time Inc. The remainder of the coated paper will be sold on the open market. Cottonwood and willow will be used in the groundwood mill and bleached pulp will be shipped in from other Crown mills.

The staff, meanwhile, is wasting little time becoming South Louisiana citizens. Two major lunchtime topics of conversation: The new Boy Scout troop organized by Crown's men and a new school, now under consideration in the Parish (which is what counties are called in this state).

Mill Employes Can Help Community Relations

Good company community relations "start with employes," said George G. Gibb, director of industrial relations, Minnesota and Ontario Paper Co., to a recent Northwestern Division meeting of the Superintendents Assn. at Duluth.

Employes, he said, should take part in civic affairs, business and service organizations, youth activities, etc.

He listed eight ways a company can improve its community relations:

1. Conduct opinion surveys to determine community likes and dislikes.
2. Develop activities to interpret company objectives to community groups.
3. Draw up a community mailing list for company information.
4. Develop a working arrangement with local newspapers, radio and television.
5. Use local media for advertising of plant activities and objectives.
6. Develop a speaker's bureau to provide information to clubs.
7. Sponsor an open house and plant tours.
8. Encourage employes to participate in civic, social and fraternal groups.

May Be "Cinderella" Pulp Tree

Monterey pine, which seldom reaches merchantable size in its native coastal California, may become a "Cinderella" pulp tree along the southern coast of Oregon. It has been grown there experimentally since 1949. Some plantings reached 9 to 10-ft. height in three years. Several seedlings grew to 10-in. diameter in six years and produced cone crops in their seventh year.

How Soundview mill was developed by Scott

From an Investment of $4,000,000

History

Builder of the original mill was Puget Sound Pulp & Timber Co., then headed by Pres. Ossian Anderson.

The mill, built to produce 175 tons of bleached sulfite market pulp per day, produced its first pulp on June 28, 1930. PULP & PAPER reported at that time: "The completed mill represents an investment of approximately $4,000,000."

Pulp was dried on two 152-in. machines imported from Sweden. At that time Puget Sound Pulp & Timber also operated mills at Bellingham and Anacortes.

In the early 1930's a syndicate headed by Harry Fair, San Francisco financier, acquired the Everett plant which was incorporated as Soundview Pulp Co. By 1951 Soundview had become the world's largest bleached sulfite mill. Operating heads during this period included U. M. Dickey, Leo Burdon and N. W. Coster. After the Soundview-Scott merger, these three associated with the successor organization. Except for Mr. Burdon, who recently retired, all currently hold key positions in Scott.

Henry Dennis, now assistant vice president of Scott Paper Co. in charge of the West Coast timber division, joined Soundview in 1937 following 14 years affiliation with St. Paul & Tacoma Lumber Co., Tacoma.

Participants from Chester

The Soundview-Scott merger culminated several years of searching on the part of the Scott organization for the right paper mill site to establish production for Western markets. President Thomas B. McCabe stated he not only liked the manufacturing potentials available to the Everett site but also the timber behind this modern pulp mill and Soundview's sound financial position. It was, at the time, the largest transaction ever consummated by Scott Paper Co.

Raymond C. Mateer, executive vice president, and G. Willing Pepper, vice president, both of Chester, participated in phases of the transaction. Mr. Pepper subsequently functioned as coordinator in the integration of the new West Coast division into the company's overall operation.

U. M. Dickey, who became president of Soundview in 1934, now serves as Scott's senior vice president and a director of the firm.

Vice President Paul C. Baldwin was, until recently, in charge of Scott's West Coast operations. He joined the firm at Chester in 1940, became paper mill superintendent in 1943 and advanced to plant manager four years later. He is a Syracuse graduate and holds both masters and doctorate degrees from The Institute of Paper Chemistry. Last year Mr. Baldwin became director of engineering, research and development for the entire firm and, a short time later, was given responsibility for manufacturing activities throughout the organization.

Loren V. Forman, now general manager of the West Coast division, Scott Paper Co., obtained a b.s. degree in chemical engineering at Iowa State, m.s. and ph.d. degrees from The Institute of Paper Chemistry. He worked for Mead Corp., Munising Paper Co., and was coordinator of applied research at the Institute prior to joining Scott in 1950. At Chester he coordinatel pulping and pulp utilization activities of all Scott mills. He moved to Everett as West Coast technical director in Oct. 1953.

He succeeds to some of duties of former Vice President Charles D. Dickey, Jr., now president of B. C. Forest Products Ltd.

Pulp Mill Manager N. W. Coster came to this country from Sweden in 1923, after studying chemical engineering at Chalmers Institute of Technology, Gothenberg, and working in Scandinavian mills. He was affiliated with Fidalgo Pulp Co. (which became Coos Bay Pulp) at Anacortes before joining Soundview in 1934 as a chemical engineer, where he later progressed to technical director and general supt.

McCabe

Mateer

Pepper

U. M. Dickey

Baldwin

Burdon (now retired)

Forman

Coster

Dennis

C. D. Dickey Jr. (now with B. C. Forest Products)

GOOD LIGHTING facilitates efficient, safer night work on Scott's Everett log pond. Woodroom for barking of large logs is at right. New paper mill is at left and center.

New Ideas, New Projects Are Keys

to a vast expansion by Scott Paper Co., with diversification of products and unusual innovations at Everett, Wash.

By LOUIS H. BLACKERBY
Western Editor, PULP & PAPER

● Since acquiring Soundview Pulp Co. in 1951, Scott Paper Co. developed this Everett, Wash., plant into a major Pacific Coast producer of household papers for distribution throughout the Western states. When the merger took place, the plant was producing straight market pulp-bleached sulfite. Its 600-ton-per-day capacity (now 800) gave it the distinction of being the largest bleached sulfite mill in the world, as it still is., Now Scott is operating a highly integrated mill at Everett and ships more than 300 tons of finished paper products daily while continuing to sell pulp.

Approximately 30,000 people own Scott common shares; about 10,000 men and women have regular employment in the organization, and millions of consumers buy Scott products.

In 1940 Scott acquired two pulp mills by (1) purchasing the entire out-

Scott Quality Checkers are "Czars"

Quality control is an integral part of production at all Scott Paper Co. plants. Each, regardless of size, has a laboratory staffed by "consumers' representatives" (Scott's term for those on its quality control team), continuously making sample checks along the line to assure that finished products measure up to exacting standards in color, weight, texture, absorbency, cleanliness, etc.

The authority of these technicians is final in rejecting substandard materials and products. Influences of the quality control pattern extend throughout the production processes, resulting in workers habitually acting as quality inspectors in their own production sphere.

Jim Lienesch, chief consumers' representative at the Everett, Wash., pulp and paper plant, and members of his department, have the last and absolute "word" as to whether or not a product produced here "makes the grade" as far as established standards are concerned. Over-all responsibility for company-wide quality rests with Burnell Garrett, director of product standards at Scott's Chester, Pa., headquarters.

Trained technicians function on round-the-clock basis testing against quality standards. Samples are taken off the machine and subjected to critical tests under accurately controlled conditions.

The quality concept gets important attention in Scott's employe indoctrination program. The emphasis starts there and continues without end. Reliance on each individual employe to contribute his or her respective share to maintaining product standards is felt to have been an important factor in the organization's growth.

standing capital stock of Coos Bay Pulp Corp., Empire, Ore., and (2) organizing Anacortes Pulp Co., which acquired a plant at Anacortes, Wash. The latter subsidiary was subsequently merged with Coos Bay Pulp Corp.

Subsequent to acquiring Soundview, the Scott organization established its present West Coast Division, with headquarters at Everett, and undertook a program which transformed the firm's Pacific Northwest operations from straight pulp to a comprehensive, integrated industrial enterprise producing 30 finished brand-name household and industrial paper products in addition to market pulps.

In May, 1953, the company dedicated its newly constructed paper mill in Everett. Subsequent completions came on rapid schedule during the ensuing years. Machine No. 1 started in Dec. 1953; No. 2 came on the line in July 1954; No. 3 in Feb. 1955; and production started on No. 4 in July 1955.

Start-up of No. 1 machine was the beginning of manufacture of the Scott line of papers on the Pacific Coast. Volume and variety of brands produced have increased ever since.

Pulp making has been improved by additional fiber recovery facilities, and production increased in both pulp and paper manufacture. The mill at Anacortes was converted from calcium to ammonia base and now produces sulfite pulp from Western red alder, a goodly portion of which is used to provide short fiber pulp for the Scott line of papers at Everett.

Extending Wood Resources

Besides the actual increase in its Pacific Northwest timber holdings, the company extended its wood supply through more intensive utilization and by expanding its purchase of pulpwood. Large quantities of wood are delivered to Everett by truck or truck-trailer by nearby suppliers.

The company extended its log purchases beyond the Douglas fir region into the "pine belt" east of the Cascade Mts. from which various species of coniferous logs are now shipped to Everett by rail. Purchase of chips is another phase by which wood supply has been extended. It gets chips from quality sawmill and veneer plant residues, by rail from as far away as 60 miles.

Consequently three separate barking-chipping systems, each designed for special types or sizes of wood, now serve the Everett mill. Besides these, a system for handling purchased chips was added recently.

HIGHBALLING LOG TRUCK THUNDERS along winding road through vast timber stands as it heads from woods operations to railroad reloading area.

Barking-Chipping

In the expanded and modernized Scott woodroom at Everett, facilities consist of:

(1) A Worthington whole-log hydraulic barker teamed with a 153-in. Sumner 6-knife chipper powered by a 1500-hp Electric Machinery motor for converting logs up to 32 ft. long and 6-ft. diameter.

(2) A "small wood" plant, with a Sumner Bellingham type barker and two round log barkers (Allis-Chalmers and Worthington), with a Sumner 112-in. 6-knife chipper driven by 600-hp General Electric motor for converting bark-free wood into chips.

(3) Newest wood processing addition went into operation last April. This consists of a drum barker and chipper for handling short logs arriving from the eastern pine country to fulfill partial wood requirements for the ammonia side of the big sulfite mill.

A 7½-ton 50-ft. span Berger bridge crane equipped with Blaw-Knox pulpwood grapple removes logs from the gondola cars, one cord per "dip," and places them on a chain-topped deck. At this point the logs embark on a transport circuit where they are reduced to 4-ft. lengths at either of two slasher saws before being moved on to the drum barker and ultimately to the chipper.

The barker, a 45-ft. long by 12-ft. diameter unit, fabricated in two sections by Chicago Bridge & Iron to Fibre Making Processes Co. specifications, normally debarks the 4-ft. logs at rate of 15 cords per hour, according to John Johnson, special projects manager. A vertically adjustable air-operated retainer gate at the discharge end provides control of emergence rate.

Logs go over a sorting conveyor where pieces with bark adhering are diverted back to the barker. Clean logs go up a conveyor, through a water-jet washer removing dust and dirt, to a Sumner 110-in. chipper.

Handling and Storage of Chips

Purchased chips arriving at the mill in open-top rail cars are unloaded by a Conveyair system of 20 units per hour capacity. A rotating unloading nozzle, hydraulically controlled for vertical and horizontal travel, picks chips directly from the cars. During unloading the car is moved back and forth by a General Electric amplidyne controlled carhaul.

A 125-hp Roots-Connersville blower provides suction for the unloading

RIGGING IS JOCKEYED into position to remove entire bundle of pulpwood from truck (above). At right is Scott's million dollar barker-chipper installation for small wood. Blaw-Knox pulpwood grapple at end of 7.5 ton Berger bridge crane lifts 8-ft. logs from gondola car and positions them on chain-topped deck in background.

phase by exhausting air from the receiver cyclone. Chips released in the cyclone fall to the bottom and enter a start type feeder which injects them into a pressure system delivering directly to a chip silo. This 400-ft. horizontal and 70-ft. vertical transport through 10-in. pipe is facilitated by another Roots-Connersville blower.

To handle the volume of chips from these various sources and to keep various types segregated required additional storage capacity. Two 42-ft. diameter steel silos, each of 500-ton capacity, supplement existing storage.

In all, there are now seven chip silos which provide direct storage for 3,500 tons of chips. Another 1500 tons capacity is provided in the chip bins above digesters.

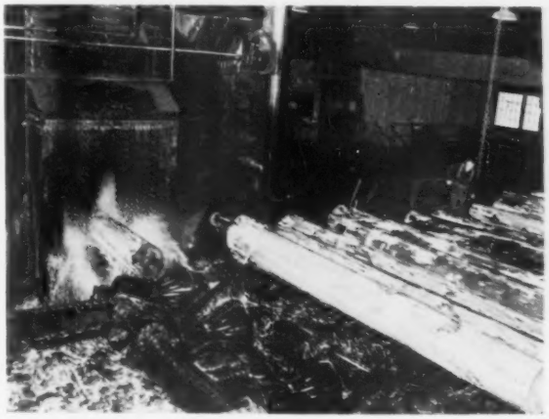
One more phase of wood handling has recently been improved. This concerns receiving salvage hemlock and white fir pulpwood logs trucked from the woods west of the Cascades.

Formerly the trucks, operated by contractors doing the relogging, delivered directly to the plant. Trucking 20 to 30 million feet of logs per year through the plant area made for congestion and other complications. These problems were expeditiously solved by installing an unloading dump for salvage logs less than a mile from the mill, reports C. E. Ridgeway, wood procurement manager.

Now trucks and trailers come to a stop on scales provided for accurate and rapid "scaling" by weight. The truck pulls over to a platform where the load is secured into a "bundle." The bundles are made by placing 2-in. Acme flat steel straps around the logs and securing each strap with clip fastenings. The truck pulls up in front of an electrically powered steel A-frame unloader where the entire load is picked off the truck-trailer and lowered gently into Everett's harbor for rafting to the plant.

Mr. Ridgeway says salvage logging of company-owned lands, besides providing additional wood per acre of timber harvested, improves growing conditions and results in more rapid reforestation. Bundling, he states, is done to conserve storage space, to reduce breakage, to make for safer towing and to concentrate "sinkers" at the point where straps are removed instead of having them in front of the log dump and scattered about the storage area.

EMPTY TRAILER IS HOISTED onto truck by electric-powered winch. Winch is short distance from log unloading operations.



TREMENDOUS WATER PRESSURE SKINS LOGS hydraulically. Here they emerge from Worthington whole log Hydro-Barker, and are inspected.

SCOTT COOKS CHIPS in these 12 sulfite digesters. Half are on ammonia base and the rest on calcium base for its high quality bleached sulfite pulps.

Solve Pulp and Water Problems

The huge Scott Paper Co. program at Everett, Wash., brought about an increased pulp making capacity of 200 tons per day, to 800 tons per day. Switching six of 12 digesters from calcium to ammonia base was a prime factor in gaining this production and facilitated utilization of additional wood species.

The increase in pulp production is about equal to the amount of sulfite pulp required in regular operation of the paper mill. Other types of pulp, necessary to create the different Scott products, are purchased in the area. There has been no reduction in production of dry baled pulp. Great quantities go to Scott's other mills and a substantial tonnage is sold, primarily to old Soundview customers.

Impco washers and deckers, Jonsson deknotters, Rietz disintegrator for fiber recovery, Allis-Chalmers motors and pumps, Dorr-Oliver chlorinated stock washer, Alaskan Copper Works heat exchangers, Bauer Centri-Cleaners (780 units on ammonia side), Honeywell controls for ammonia unloading, Jenssen cooling system and American Heat Reclaiming units are some of the special equipment used in this huge pulp mill.

Steam power capacity was enlarged by installing three more boilers (one Riley and two Combustion Engineering; new water filters were added.

Boilers Converted to Gas

Early this year the two 150,000 lb. per hour oil-fired Combustion Engineering boilers were modified to operate on either natural gas or oil. Gas conversion is being completed on two other boilers—the 150,000 lb. per hour Riley, installed in 1953 as one of the first added in Scott's expansion, and a 120,000 lb. per hour Babcock & Wilcox, in operation since 1940. Boiler manufacturers provided the conversion burner equipment and Scott personnel completed the installation. Bailey Meter Co. controls are used on gas-equipped components.

With all four boilers on natural gas, the Everett plant will be consuming 12,000,000 cu. ft. per day, making it the largest customer of Washington Natural Gas Co.

More Fiber Recovered

An additional fiber recovery system installed last year is a significant factor in reclaiming high-grade fiber from knotter and flat screen rejects. The system salvages about one-third of the screenings and knotter rejects as standard high-grade pulp.

According to Norman S. Lea, pulp mill technical director, "the system employs a routine process, with no unusual equipment, but it has served well."

Previously recovered rejects were wet-lapped and sold. Now they make 6 to 8 tons daily of quality pulp. Recovered fiber is injected into the main brownstock screen system ahead of primaries on the ammonia base side.

After flat screening, the mixture passes through the bleach plant then over rifflers, additional flat screens and then through four stages of Bauer Centri-Cleaners before deckering. This system consists of 1,595 Centri-Cleaner units—780 on ammonia side, 815 for calcium-base pulp.

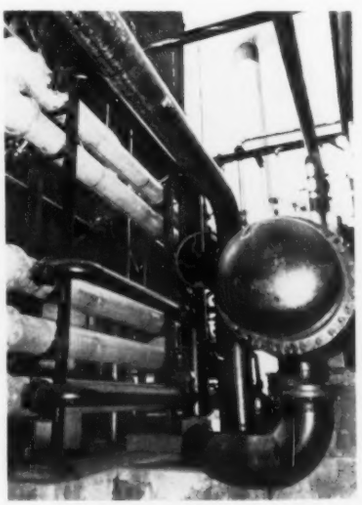
Water Was a Problem

To increase production, Scott faced a problem involving limited water supply. Capacity of the city system, from which the plant obtains industrial water, imposes an upper consumption limit of 65 million gals. per day. Through efficient usage, the mill was able to accomplish its expansion without sacrifice of washing quality or over-drawing on the supply. Current consumption runs about 62.5 million gals. daily.

Reusing surplus white water from the paper mill in the hydraulic debarking process saved between five and six million gals. every day.

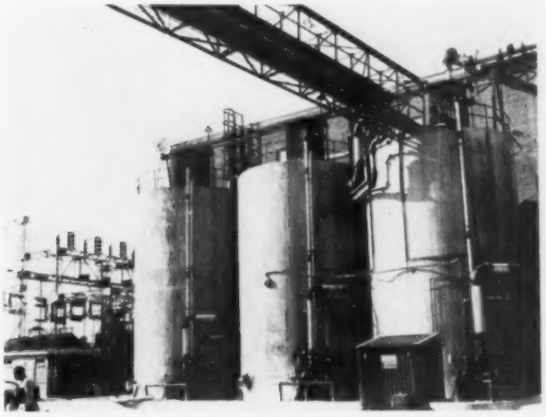
The water recovery system receives surplus white water from the paper mill and removes the contained fiber by passing it through a 100-mesh wire rotary screen before the water is delivered to a 60,000-gal. collector tank. It is pumped from this point to the hydraulic barkers.

The barkers can operate entirely on recovered water, on straight fresh water or the proportion of white-to-fresh can be varied over a wide range. Standard operating procedure calls for maximum use of recovered water.



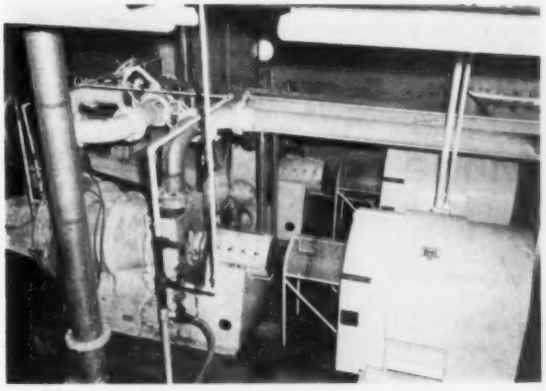
HEAT EXCHANGERS on ammonia system use by-passed mill process water to cool ammonium sulfite-ammonium bisulfite solutions to desired temperatures. Unit at right was built by C. F. Braun & Co., two stainless exchangers at left by Alaskan Copper Works.

Refining, Refining and More Refining is Scott's key to quality stock preparation

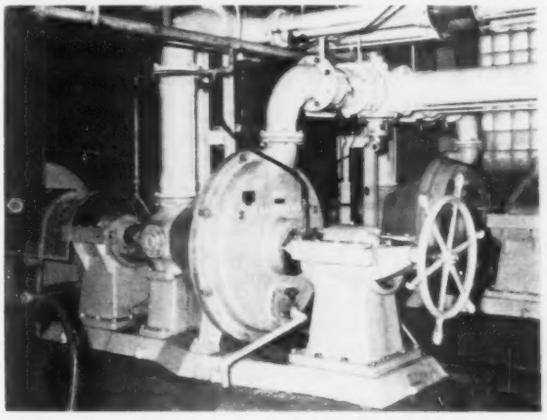


FOR LOW CONSISTENCY PULP STORAGE, four tanks (3 shown) are used: hardwood sulfite (from Scott's Anacortes mill in baled form), purchased groundwood, slush sulfite and broke pulp.

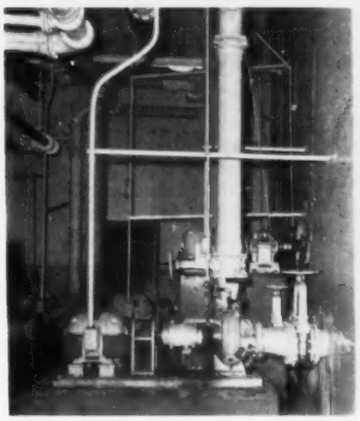
PULP IS REFINED by Morden Stuff-Maker enroute to stock meter at upper right. Special meter, controlled by Mason-Neilan panel, was designed by Scott engineers, built by Western Gear Corp.



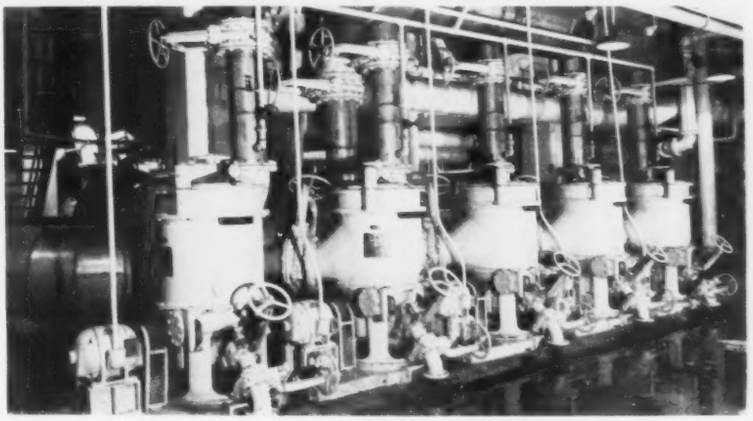
STOCK IS JORDANED in six (2 shown) Shartle Bros. (Black-Clawson) Miami No. 6 jordans. Each is driven by a Westinghouse 300-Hp motor.



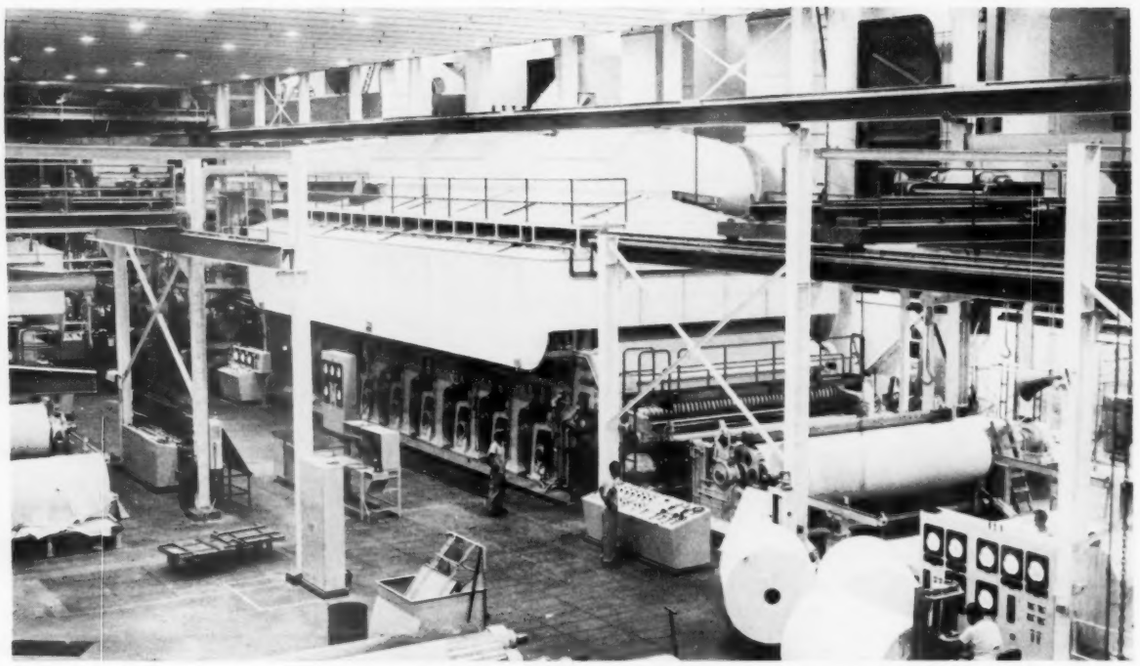
STILL FURTHER REFINING is provided by two Emerson Claflin refiners which prepare stock just ahead of No. Two paper machine.



BLENDED STOCK MOVES to storage chests through these Allis-Chalmers pumps driven by G.E. motors.



FINAL REFINING STEP are these five Shartle Selectifier screens operating in basement of Scott paper mill. Each Selectifier is driven by a General Electric splash-proof motor. Stainless piping is by Northwest Copper Works.



NEWEST PAPER MACHINE for waxed paper, toweling, etc., is No. 4. All four machines for Fourdriner-yankees. Each operates over 2,000 fpm., has 206-in. wide, 70-ft. long wires

How Scott Products Are Made

Scott Paper Co.'s impressive paper mill building at Everett, Wash.—a large structure 350 ft. wide by 475 ft. long—is equipped with escalators for transporting personnel from ground level to either of two upper levels. It houses all four machines as well as a stock preparation section and extensive converting facilities. The interior is faced with salt-glazed brick of harmonious colors.

Pulp arrives at the stock preparation section from three sources. Coniferous sulfite pulp in slush form comes by pipe from the Everett bleached sulfite mill at 3.5% consistency; bleached hardwood sulfite from the Anacortes mill in baled form, and baled groundwood is purchased from an outside source.

Four tanks store for each of these three pulps and broke pulp, each with capacity for 10 tons at 3% consistency. Slush pulp is pumped directly from the bleach plant. Baled pulps are individually processed through Liebeck breakers and pumped to storage tanks.

From these outside storage units pulp is pumped back into the preparation section to be continuously and accurately blended according to requisite characteristics of the brand to be produced. Two pulps receive additional processing before blending. The groundwood and alder sulfite pulp are lightly refined to insure complete defibering.

Pulps are blended through volumetric stock meters and color is also metered for each machine on a continuous basis. The resultant stocks go directly to machine stock chests equipped with Impco agitators.

Various Refining Processes

Refining equipment ahead of the paper machines includes six Shartle Miami No. 6 jordans, three Emerson No. 2 Claflins, and a Stock-Maker and Stuff-Maker, both Morden machines, thus providing a variety of stock preparation for different machines.

There is a vast amount of special tile work in pulp preparation and paper machine chests which is divided between Stebbins Engineering and Chemical Linings. Each did a large number of chests, boxes, etc. Over 100 pumps at Everett were provided by Allis-Chalmers.

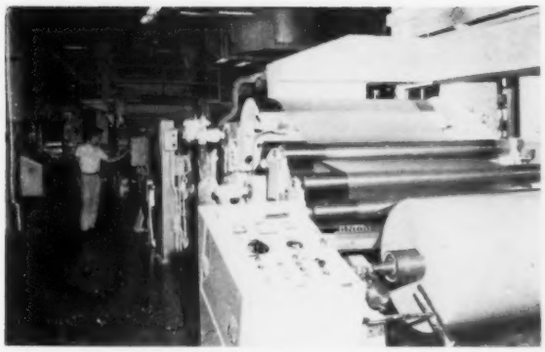
Paper manufactured at Everett consists of light to medium weight stocks produced on four Beloit Fourdrinier-type machines which operate at speeds exceeding 2,000 fpm. Each has a 12-ft. Yankee dryer, built by Newport News Shipbuilding & Drydock Co., weighing approximately 75 tons apiece. Three machines have a grilled suction breast roll, primary vacuum couch and Scott "nozzle" type headbox. Machine No. 4 has a Beloit air-loaded headbox. All machines except No. 1 have after dryers. Each is equipped with a machine calender stack and, except for No. 3, all have rewinders. Wire size is 206-in. by 70-ft.

The machines are powered by General Electric sectional drives—1250-hp on each of the first three and 1,000-hp on No. 4. The four, with auxiliaries, have an aggregate of 32,000 connected horsepower.

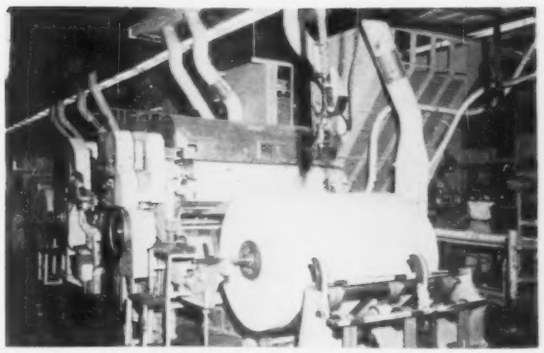
In the Converting Area

Subsequent to receiving quality approval the parent paper rolls are transported from machine room to the finishing department for converting.

The finishing operations, headed by Supt. John N. Sharp, consist of three separate divisions. Division A went into production in Dec. 1953, making ScotTissue and Soft-Weve toilet tissue rolls. Two months later another unit was added to produce Waldorf tissue rolls. In May 1954 another machine came into production making Soft-Weve—at which time the first two units were devoted entirely to Scot-Tissue. Later another machine came



"CUT-RITE" IS PRODUCED in wax finishing section of converting plant. Components include Beloit supercalender (upper left) and Dilts waxer at right.



TOILET TISSUE ROLLS ARE SLIT-REWOUND on battery of four Paper Converting Machine Co. units. Two operators control four units.

into production making Waldorf and the third unit switched from Waldorf to ScotTissue.

Production of towels started in August 1954 with installation of equipment for making both the big roll and regular size roll.

Paper Converting Machine Co. built the tissue and towel winders; Package Machinery Co. made the towel-wrapping equipment.

In Division B a tube-making section began operating at the same time Division A inaugurated production. Subsequently, in June 1954, a facial tissue unit (designed by Scott and built by Western Gear Works) began producing Scotties in 200 and 400-sheet packs. Three months later a Hudson-Sharp machine was installed to produce luncheon and dinner Scotkin napkins.

Production of Perf-Embossed folded towels began early in 1957 on an automatic machine designed by Scott engineers and built by Hyers, Castner & Harris.

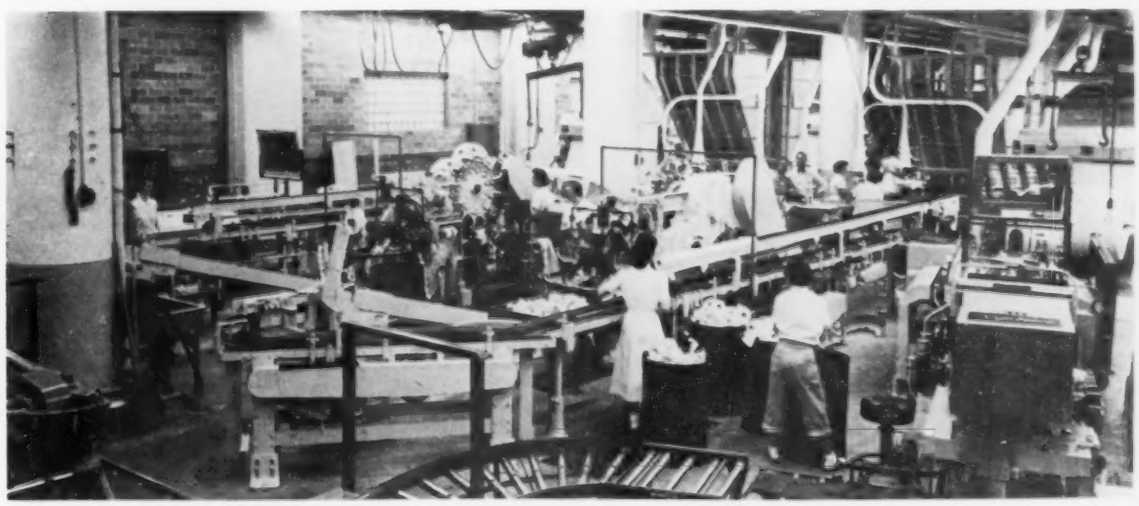
Division C has operated a wax finishing section since March 1956 producing Cut-Rite wax paper. Production facilities in this section include a Beloit supercalender, Dilts waxer and Paper Converting Machine Co. winders.

Special Employe Training

The Everett expansion provided exceptional opportunities and problems. One of the latter was the necessity to screen, select and train some 900 new employes to operate the four machines and related equipment, within a less-than-three-year period. A nucleus of key men from other Scott plants accomplished the feat under the active leadership of Ben Haug, production manager of the paper mill.

Several thousand applications for employment were first screened carefully by the personnel department, headed by William B. Gorbutt, plant personnel manager. For a guide they followed the tentative table of organization requirements set up by the production staff.

Candidates received personal interviews in conjunction with the first screening. Further delineations were made according to tests, references and personal judgment. Kopas tests, which rate mental alertness, background, manual coordination, vocational interests, personal characteristics, emotional responsiveness and am-



SCOTT QUALITY IS EMPHASIZED in training of hundreds of women who are employed in converting large parent rolls into consumer products and wrapping and packaging them for shipment in this finishing department. Operation is largely mechanized and automated.

bition, were used as one of the "tools."

The first machine served for on-the-job training and proving ground for personnel scheduled to man the three machines to follow.

Off-the-job meetings, featuring less tangible facets of papermaking, supplemented in-plant training. These sessions, held at night or immediately following end of a shift, featured safety, Scott's quality control concept, and orientation concerning the company in general. They also covered broader aspects of the industry as well as such "close to home" benefits and policies as:

1. A modern, attractive employe cafeteria, where hot meals are prepared and served at reasonable prices.
2. Availability of standard work clothing.
3. Personnel programs including insurance, fringe benefits, etc.
4. Safety—policy, practice, first aid.
5. Medical program including visiting nurse and yearly medical examination plan.

These preliminaries materially contributed in the development of what Mr. Haug call "a good hard-hitting production team."

What It Takes In Raw Material

Aside from about three-quarters of a million board ft. of pulpwood required daily (about 1,500 cords) to operate the Everett plant, the following quantities of raw material are employed each day in manufacturing of 800 tons of pulp and 300 tons of finished paper products:

Water	**62.5 million gals.**
Electric power	**715,000 kwh**
Sulfur	**170,000 lbs.**
Lime Rock	**140,000 lbs.**
Chlorine	**72,000 lbs.**
Ammonia	**32,000 lbs.**
Lime	**24,000 lbs.**
Caustic soda	**20,000 lbs.**
Pulp from other mills	**125 tons**
Packaging supplies	**4 carloads**
Fuel oil	**400 bbl.**
Natural gas	**9,000,000 cu. ft.**

Manpower requirements are also sizable—over 1,500 persons are employed in the Everett plant and an estimated 700 are occupied in providing pulpwood in its various forms.

"We reached our present levels of production and quality because we have high type people manning the machines," he said. Since starting up the paper mill, 74 people have advanced from hourly to supervisory responsibilities.

Growth of Scott's Western distribution and marketing group has kept pace with the production increase and brand diversification taking place at the Everett plant. Five retail sales divisions—Dallas, Houston, Los Angeles, San Francisco, Seattle—are now served in whole or in part with products from this mill as are industrial sales offices in Seattle and Los Angeles.

Revamp Power Distribution System

Scott Paper Co. has redesigned the power distribution systems in its mills for greater economy and efficiency. Scott engineers made a careful analysis of various cable supporting systems seeking a lower installed cost.

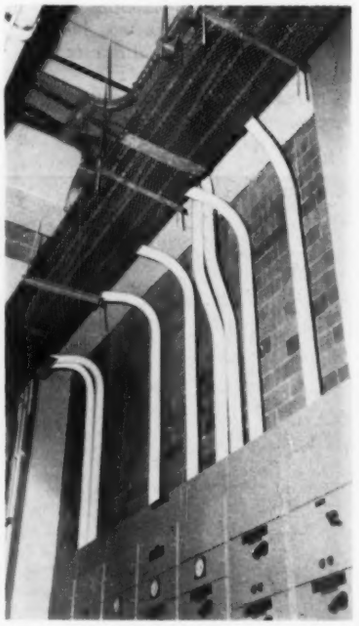
Cope metal cable trough was selected for the Everett mill. Here, all four paper machines are wired with cable supported in trough used as a raceway. Each machine requires about 1,600 ft. of trough, including feeder lines—a total of more than 5,000 ft. in the mill.

One big factor in saving, besides lower initial cost and easier changes, is the increased current carrying capacity of the cables when used in cable trough as opposed to conduit, say engineers. For example, a 600 volt line in the Everett plant carrying 285 amps would require 500 MCM cables in conduit, as opposed to a 350 MCM cables in trough. This trough rating is for double stacked cable with an 0.8 of air rating allowing for double stacking.

Scott's current ratings are very conservative, based on an ambient temperature of 50°C (112°F) when 40°C is usually considered ample for this type of installation. Many industrial installations have been figured on a 30°C ambient. Scott allows for the extra temperatures that may be encountered over calender rolls, pulp dryers, etc., calculating the maximum temperature exposure and basing the entire circuit on the maximum that may be present in only one small area.

Scott engineers state that the biggest single advantage of cable trough is the labor saved at the time of installation. Crews with power saws and welding equipment assemble several lengths of trough on the floor and lift the entire run into position. This is readily possible since a 10 ft. length of 12 in. width Cope expanded metal cable trough weighs only 36 lbs. A 10 ft. length of 4 in. rigid wall conduit weighs approximately 90 lbs. And seven 4 in. conduits are needed to carry the same amount of cable as one 12 in. expanded metal trough (solid trough is not only heavier but requires lower cable current ratings that are closer to the low cable current ratings of conduit). Since a simple connection of two sections of trough takes no longer than a simple connection of two sections of conduit, the labor savings are great.

Material savings also are appreciable. A 24 in. wide trough will carry as many cables as sixteen 4 in. conduits. This means a savings of more than a ton of steel in every 40 ft. And since conduit is heavier, much heavier conduit supports are necessary.



CABLE TROUGHS WERE USED EXTENSIVELY when Scott redesigned its power distribution system because of their lower installed cost, greater carrying capacity.

PRESENTS AWARDS AT 25TH CZ PAPER SCHOOL GRADUATION. A. G. "Buff" Natwick, vice pres. East Texas Pulp & Paper, says student & staff efforts "are worth while" on return to Camas where he was instrumental in founding the school and subsequently served 19 years as dean while asst. res. mgr. of this big Crown Z mill. Seated (l to r) E. W. Erickson, vice pres. CZ San Francisco, F. O. Boylon, res. mgr. CZ Camas and school regent, A. M. Cady, school dean and asst. supt. gen. mill maintenance, Camas.

CZ School Sets 25 Year Records

as 253 students finish another year. In 25 years, 497 complete full 4-year. Total attendance, 1,887, in unique institution . . .

• CZ Paper School has rounded out a quarter-century of education for employes. Except during the early, formative years, students here have been able to obtain full college credit for their participation in this unique educational enterprise.

Heralding completion of the 25th year, A. G. "Buff" Natwick, the school's former dean, now vice pres. of East Texas Pulp & Paper Co., returned to Camas, Wash., to present awards and diplomas to students graduating from the third and fourth year classes.

Much of the school's basic success has been credited to long and continuous efforts of Mr. Natwick who was asst. res. mgr. of the big Camas mill from 1929 to 1952. Due in considerable measure to his work, the school was established in 1933. During the ensuing 19 years he headed the staff as dean.

F. O. Boylon, res. mgr. of Crown Z Camas div. and a regent of the school, commended both staff and students for contributing their own non-paid, non-subsidized time and effort to make the school successful. He urged students to continue interest in education and progress.

Dean A. M. Cady, asst. supt.—general mill maintenance at Camas, favorably reporting on student attendance and participation. Because of the large number of participants, 1st and 2d-year students receive their diplomas one night, the 3rd and 4th the next. This year's graduation addresses were delivered by Rabbi Julius J. Nodel, Congregation Beth Israel, Portland, and Dr. H. D. Kreager, director of Wash. State Dept. of Commerce & Industry. Rabbi Nodel commended Crown Z for its "long-range training-living" program.

During the school's first year 190 employes applied for enrollment, 55 completing this first-year course; 14 of these original students continued

Fourth Year Class Graduates (l to r)

Front Row: James L. Stoll, Hugh B. Riley (West Linn), Calvin P. Horn (Waterway Terminals Co.); Laurell T. Johnson, Raymond E. Mikesell, Charles E. Beck. *Second Row:* Harold P. Miller (Portland Office), David K. Sturdevant (Western Waxide); Everett L. Shaw, Donn J. Carey, Arthur O. Perrault, Douglas F. Miller, Sangho Beck, George W. Reed (Western Waxide). *Third Row:* Henry T. Boss, Paul C. Anderson, Kenneth P. Warneke (St. Helens), Henri Van Tricht (Western Waxide), Raymond W. Nordstrom, Elmer C. Mays (West Linn); Hubert L. Sparrow (West Linn), John D. Elder (West Linn), John H. Sayles (St. Helens). *Fourth Row:* L. Burton Zurcher (St. Helens), Eugene D. Frost (St. Helens), Russell Roberts (St. Helens), Carlyle E. Gentry, Vernon A. Burns, Richard F. Clarke, Homer D. Graham (Western Waxide), Fred D. Bernard (Western Waxide); Willis W. Waddle.

on to become graduates of the first fourth-year class. During the school's 25 years, 1,887 CZ employes enrolled in first-year classes and 497 completed the full 4-year course. These were from most CZ divisions and affiliates in the area.

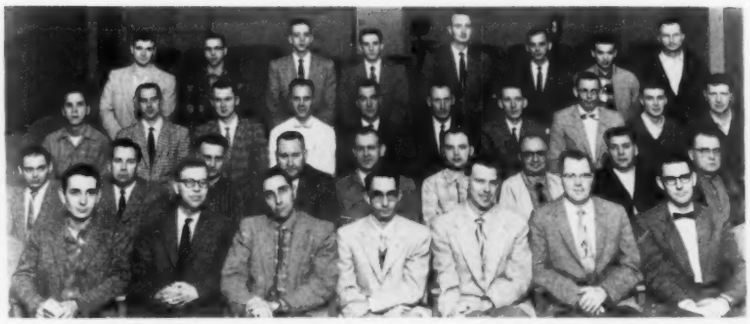
The 25th graduating class consisted of 89 first-year students, 91 second-year, 39 third, and 34 fourth-year. Of these, 122 were from Camas, 39 from West Linn div., 29 from St. Helens div., 32 from Western-Waxide div., 12 from Portland, Ore., office and 19 from other CZ offices or plants.

The Curricula

First-year students study production phases from woods to pulping, including bleaching; 2d year curriculum resumes at this point, carrying on through finishing and converting and includes lectures on research, sales, production planning, purchasing, accounting and management. About one hour is devoted to mill visits to each three hours of class work these two years.

Curricula of the upper classes call for 16 hours of operational study in the mill, per school quarter, on the student's own time. A. W. Neubauer, school principal and supervisor of coating and sizing at Camas, points out that students in this training phase punch a time card in and out and have mill visits verified by supervisory personnel. Four hours are devoted to operational study per classroom hour. Advanced courses cover more comprehensively the same operation phases as are introduced during the first two years.

Each graduate of the 4th year class receives, in addition to his diploma, a copy of "Making Paper" (the school's 700-page textbook authored by Crown personnel and now in its third edition—each edited or co-edited by Mr. Natwick), and a two-year subscription to PULP & PAPER magazine.



Third Year Class Graduates (l to r)

Front Row: Luc Brocart (audit student), Hans Heijne (audit student), John Ballo, William Jessett, Leland A. Kelson, Donald A. Christianson (West Linn), Russ Lawton, Professor. *Second Row:* Donald F. Dunn, John (Bill) Anderson, Roland L. Sundstrom, John G. Finel, Hugh Gittings, Alan P. Anderson, Arthur R. Hillary (Western Transportation Co.) Claire M. Beeler (W.T.Co.), George E. Stevenson (W.T.Co.). *Third Row:* Richard M. Sawyer, Byron D. Lewis (West Linn), Merl C. Rees, (West Linn), Joseph P. Blaschka, Robert A. Little, Richard Howell, Jr. (West Linn), James K. Howell (Western Waxide), Henry D. Marquis (West Linn), Roy E. Snell (W.T.Co.), Laurence W. Altree (W.T.Co.). *Fourth Row:* Paul C. Applegate, Glen A. Witters, (St. Helens), Jerald N. Crippen (St. Helens), Virgil A. Wellborn (St. Helens), William D. Lauritzen (St. Helens), Edward L. Deal (St. Helens), Robert F. Cameron, Luis A. Turner (Western Waxide).

Administration . . .

Regents heading CZ Paper School are R. O. Hunt, exec. vice pres., CZ San Francisco; Mr. Boylon, and M. J. Otis, West Linn, resident mgr. In functional charge are Dean Cady; Associate Dean C. A. Enghouse, asst. resident mgr. at West Linn, and Mr. Neubauer, principal.

The faculty staff (from Camas unless otherwise designated) are: Prof. fourth year—M. R. Rivers, gen. supervisor, steam power maintenance and operation; assoc. 4th yr. profs.—R. G. Carter, industrial engr., West Linn; J. E. McCourt, shift foreman-paper machines, wrap, and F. H. Terrall, industrial engr. St. Helens; prof. 3rd yr.—Russ E. Lawton, industrial engr.; assoc. 3rd yr. profs.—H. L. Ostenson, asst. paper mill supt.-tissue, P. T. Davis, section leader of pulping lab., West Linn, and D. P. Ashton, tech. supervisor, St. Helens; prof. 2nd yr.—W. L. Rich, head bag factory inspector; assoc. 2nd yr. profs.—F. T. Dowdy, asst. supervisor mill purchases; prof. 1st yr.—R. G. Stewart, asst. sulfite supt.; assoc. 1st yr. profs.—C. W. Davidson, tech. supervisor, and C. A. Anderson, development chemical engr.; admin. assts.—L. E. Semke, development chemical engr., and C. T. DeVoe, inspector-maintenance and control dept.; registrar Leona Blair, stenographic dept. supervisor.

Faculty advisors are W. M. Hearon, general mgr., chemical products div., G. D. Bailey, project engr.-paper machine and finishing, W. C. Jacoby, supervisor, product quality and development; W. F. Cyrus, asst. tech. control supervisor, West Linn, P. V. Millard, asst. to supervisor, product quality and development.

Fourth Year Honor Students win trip to mills (l to r)

Seated: Donn J. Carey, James L. Stoll (Camas); Fred D. Bernard (Western Waxide), Elmer C. Mays (West Linn). *Standing:* Kenneth P. Warneke, L. Burton Zurcher (St. Helens); Harold P. Miller (Portland Office), Hugh B. Riley (West Linn).

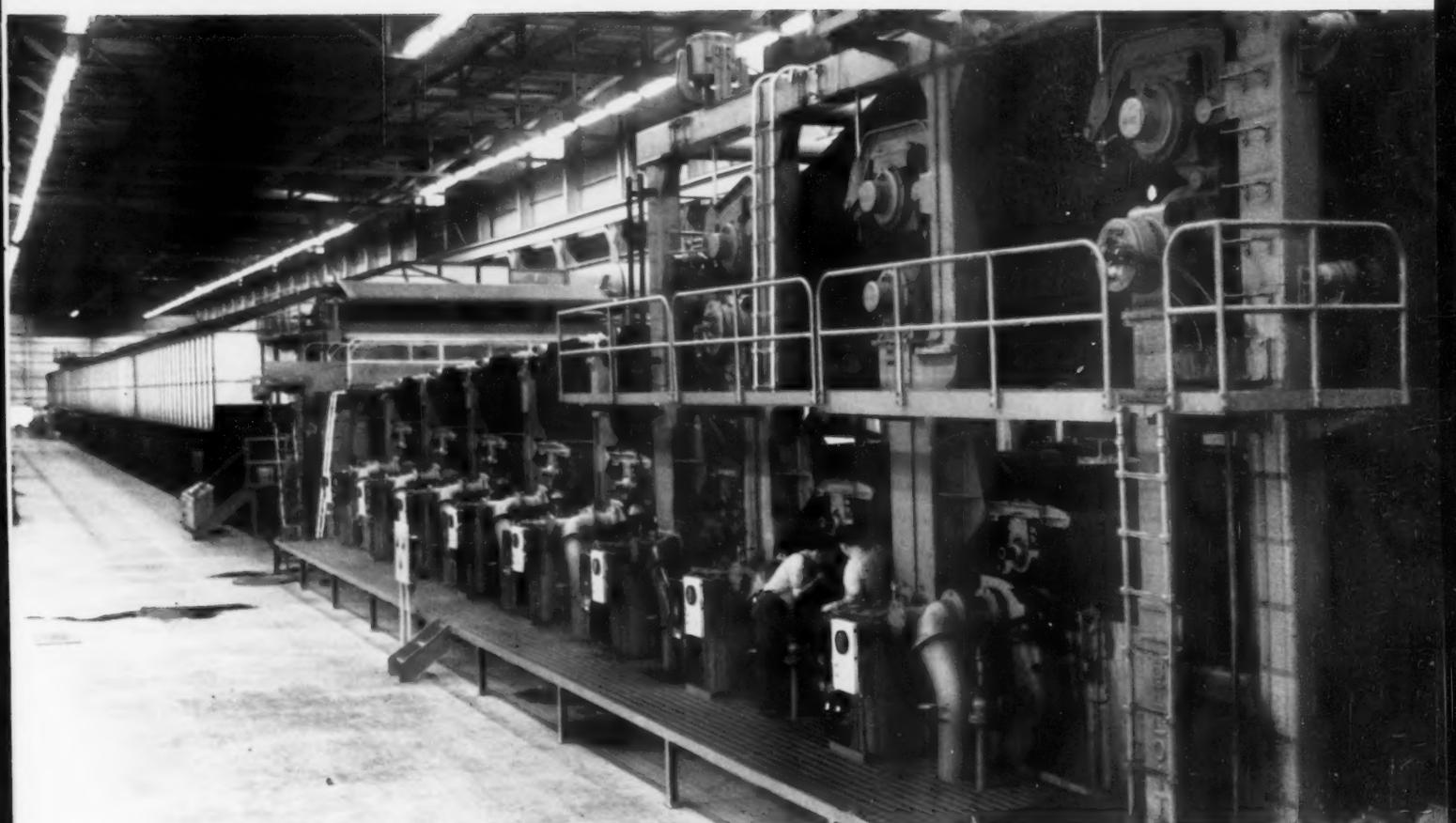
Earn Third Year Honor Awards (l to r)

Dean Olson (West Linn), Melvin G. Scharringhausen (Western Div. Accounting, Portland); Richard D. Howell, Jr. (West Linn); Donald L. Kirpatrick (Camas), Leland A. Kelson (Camas), Luis Turner (Western Waxide). Virgil A. Wellborn and Glen A. Witters of St. Helens not present for picture.

Other Honor Awards

Second year honor awards went to: Robert J. Kennedy Jr., and Hugh P. Loy (Camas); James H. Baxter and Harold G. Froescher (West Linn); Robert E. Franson and Charles A. Henke (St. Helens); Kenneth J. Dobos (Western Waxide), and Robert S. VanArnam (Waterway Terminals).

First year honors went to: Hans O. Heijne and Ernest A. Stewart (Camas); James L. Christiansen, John A. Lindstrom and Charles W. Walstrom, Jr. (West Linn); John W. Younie and Norman L. Riley (St. Helens); Robt. N. Terrall and Leslie A. Olsen (Portland), and James T. Drum (Western Div. Accounting).



The Eden Mill, No. 3 Machine, Whippany, New Jersey. Photo by J. W. Miller

Whippany Paper Board Co., Inc.

"The Metropolitan," 234" eight-cylinder Beloit board machine, is the largest cylinder board machine in the world. Advanced design features of this giant are expected to set new standards of performance in the paper-board industry.
—"*Your partner in papermaking,*" *Beloit Iron Works, Beloit, Wisconsin.*"

We are now equipped to ship Molten Sulphur in tank car lots to any point in the United States or Canada.

Advantages? No contamination . . . no wind or water losses . . . cheap unloading . . . cheap melting cost . . . ready to use.

We shall be glad to discuss this new shipping service in connection with your requirements.

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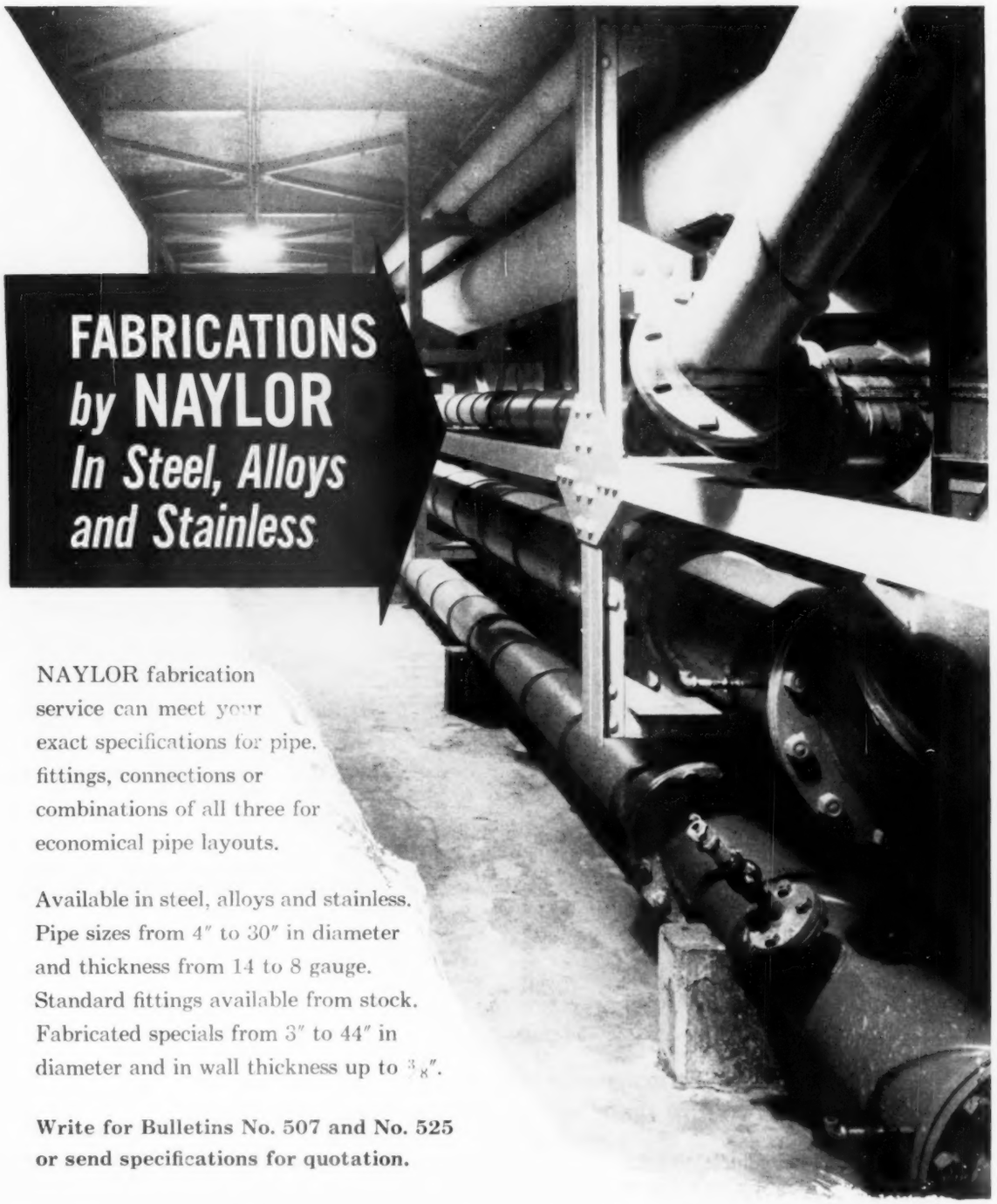

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NAYLOR fabrication service can meet your exact specifications for pipe, fittings, connections or combinations of all three for economical pipe layouts.

Available in steel, alloys and stainless. Pipe sizes from 4″ to 30″ in diameter and thickness from 14 to 8 gauge. Standard fittings available from stock. Fabricated specials from 3″ to 44″ in diameter and in wall thickness up to $\frac{3}{8}$″.

Write for Bulletins No. 507 and No. 525 or send specifications for quotation.

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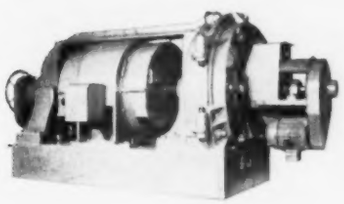


COLD CAUSTIC PULPING OF EUCALYPTUS WOOD

Behind the technical story of successful cold caustic pulping, soon to be revealed by Australian Newsprint, is the superb performance of three 36-2 500 hp "Sprouts." Refining of eucalyptus woods for use in newsprint is being accomplished at 50 hp days per O. D. ton. Consistent yields of 90% are being achieved. The CSF is 150.

Prior to the installation of the Sprout-Waldron cold caustic process, the furnish for newsprint at this Tasmanian mill was 18% bleached kraft (pine), 82% eucalyptus groundwood. Machine speeds were 1080-1200 ft. per minute. With cold caustic refining, the furnish is 18% bleached kraft, 20% cold caustic and 62% groundwood. Machine speeds have increased by 100 ft. per minute and newsprint strength is equal to the world's best.

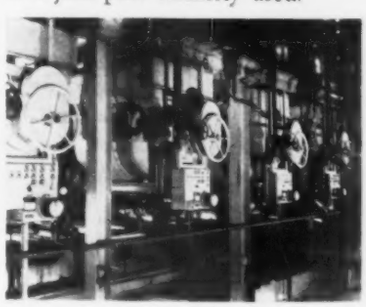
For the full story on this and other Sprout-Waldron cold caustic installations, call or write today. Sprout-Waldron experience with cold caustic refining is based on successful installations and actual production. Why not put this experience to work for you without obligation?

Sprout-Waldron has a condensed catalog available for your use. Ask for Bulletin 183.

S-W REFINERS PLAY BIG ROLE IN "DREAM" PLANT

The American Boxboard Company at Filer City, Michigan is a "dream" plant come true. It is a pushbutton pulp mill set up to process over 300 tons per day continuously, seven days a week, requiring only two operating men plus a clean-up man for each shift. The 450 HP S-W refiners fit right into this picture of precision operation and automatic control. Each of the five 36-2 single disc refiners has its own automatic control panel which contains an indicating KW HP meter; RPM meter for the variable screw feeder; speed control for the feeder; pushbuttons and indicating lights for the refiner motor, throat screw feeder and oiling system. This combination of high speed, carefully metered feeding and the precision operation of the refiners means one pass quality reduction of chips to fiber.

One of the highlights of this NSSC pushbutton system at American Boxboard is the fact that it permits the use of the prolific aspen wood in place of the more expensive jack pine formerly used.



Four of the five 450 hp 36-2 Sprout-Waldron refiners helping to make .009 corrugating board for American Boxboard.

FLAT BED DRAINER DEWATERS CHIPS & REJECTS

The Sprout-Waldron flat bed drainer de-waters or drains chips and rejects conveniently and economically while providing a steady even flow. It operates on the principle of a drag conveyor, with the stock traveling over a stainless steel screen plate to permit the necessary separation of liquids and solids.

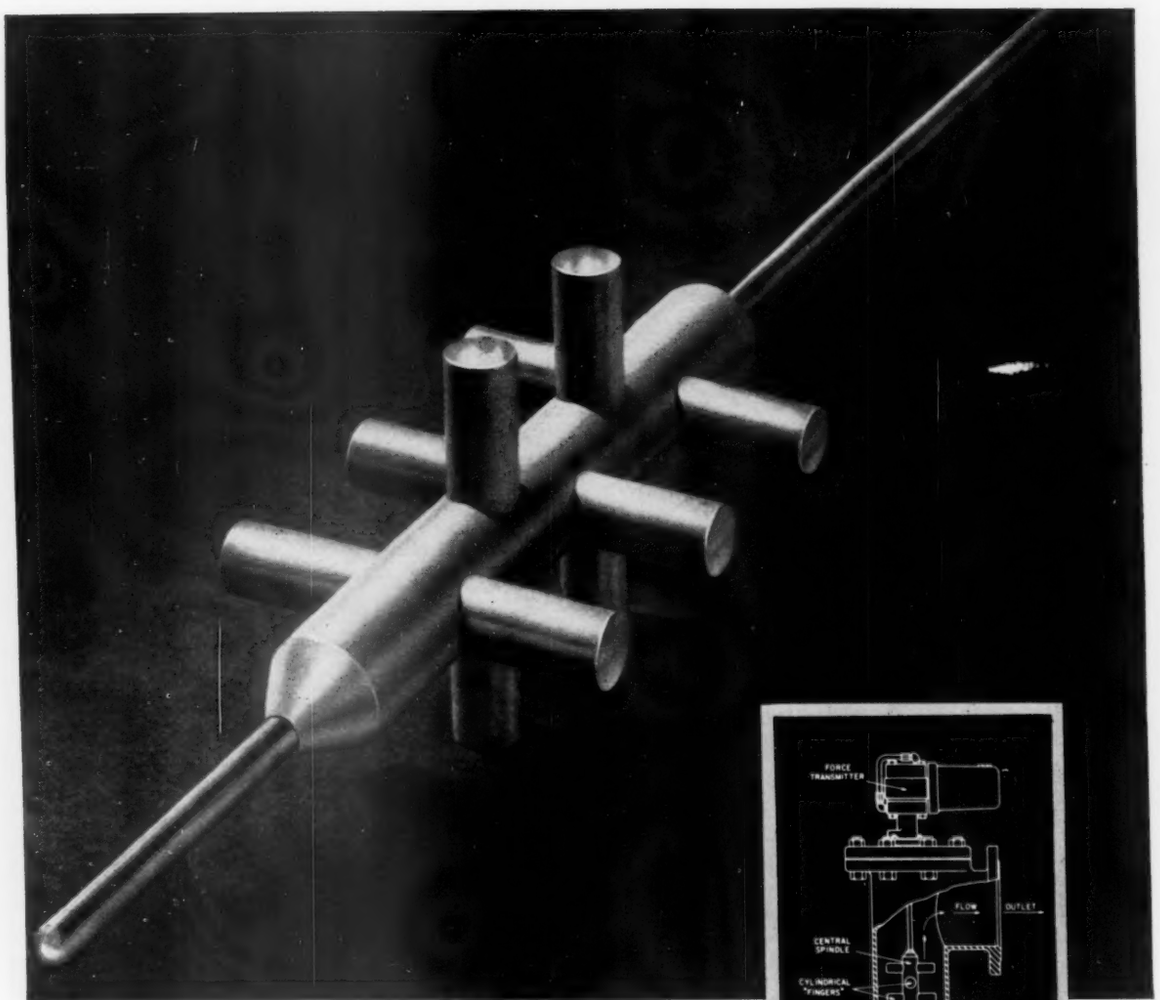
The use of this modern flat bed drainer has proved particularly successful in systems designed by Sprout-Waldron for feeding semi-chemical chips from blow tanks. Such systems include efficient proportioning arrangements, accurate feed rate regulation and freedom from valve plugging. Flat bed drainage increases efficiency of any feeding system by assuring proper consistency of stock and providing even steady feed. Features include flexible and adjustable leather scraper blades, special wear-resisting nylon blocks to reduce friction, special anti-friction bearings and a wide variety of available screen areas from 12 to 50 sq. ft.

— SW —

LABORATORY MIXER

The small, compact S-W laboratory mixer designed for research and pilot plant work is described and illustrated in Bulletin No. 188.

PP/102



Sensitive fingers measure and control consistency

The unique object shown in the photo is a specially designed float used in the New F & P Consistency Regulator. This regulator *now* makes it possible to *continuously* measure and *automatically* control pulp and paper stock consistency . . . with complete immunity to velocity and freeness changes. Mounted directly in the process pipe line or in a sample line, this amazingly simple device measures stock consistencies in the range of 2% to 8% *with an accuracy of ± 0.1%.*

Get complete data and specifications by writing to Fischer & Porter Co., 2158 County Line Road, Hatboro, Pa. In Canada, write Fischer & Porter (Canada) Ltd., 2700 Jane Street, Toronto, Ontario.

The many fingers projecting from the central portion of the float cause the flowing stock to be sheared or deformed about them. This kneading action of the fingers creates a force which is sensed and pneumatically transmitted by a force transmitter. The resultant force is proportional to stock consistency. Variations in flow rate over approximately 10 to 1 range do not affect the consistency reading.

FP

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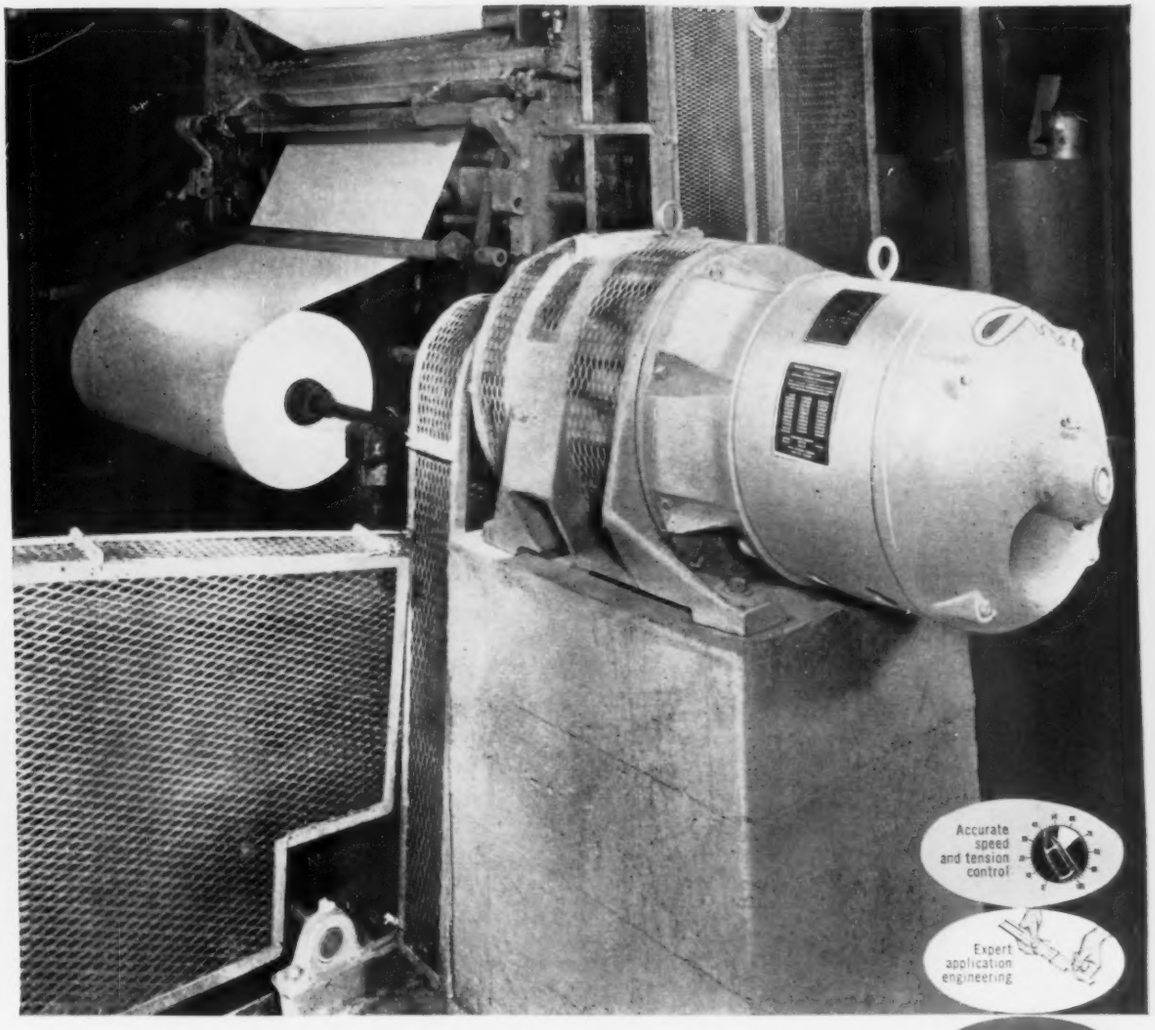
Complete Process Instrumentation



Improve your control of speed or tension– with Louis Allis adjustable speed drives

Every day paper makers and converters are turning to electrical adjustable speed drives for finer, more precise speed or tension control. The widely varied requirements in handling all forms of material from tissue to polyethylene make accurate web control a necessity to keep production high and waste low.

To meet this increasing need, Louis Allis offers you *two* kinds of adjustable speed drives—each one particularly suited to handle specific needs!

The Ajusto-Spede® in sizes from 1 to 75 hp, is a maintenance-free, easily controlled A.C. eddy-current clutch drive for operations where simple, accurate control of individual units is desired.

The Select-A-Spede® in sizes from ½ to 200 hp, operates on A.C. power, but offers precise, stepless D.C. control. With it you can have infinitely adjustable speed for individual drives or for precision-matched or interlocked multi-motor drives.

In either case, you can depend on improved production control and increased output. For expert application help, prompt delivery, and competent service, contact your local Louis Allis District Office — or write The Louis Allis Co., 444 E. Stewart St., Milwaukee 1, Wisconsin.

LOUIS ALLIS

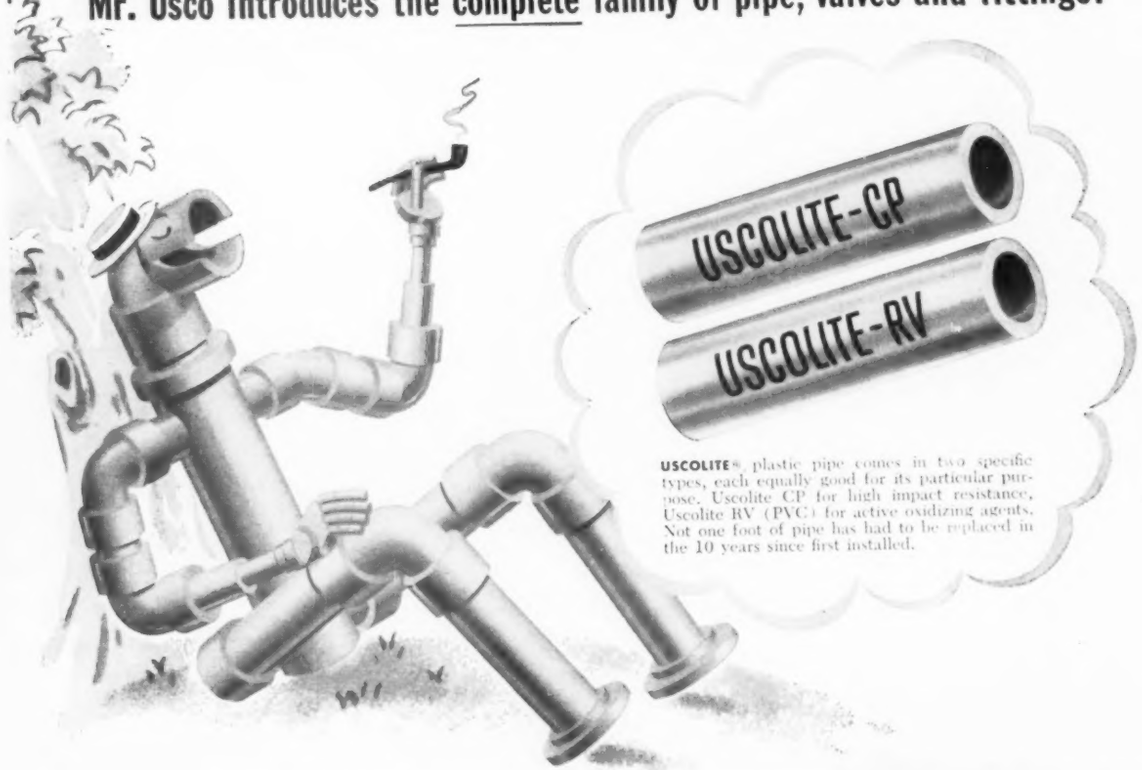
ASD-111

MANUFACTURER OF ELECTRIC MOTORS AND ADJUSTABLE SPEED DRIVES

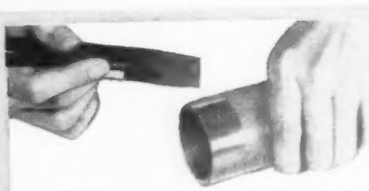
USCOLITE PLASTIC PIPE

PIPE DREAMS come true!

Mr. Usco introduces the complete family of pipe, valves and fittings!



USCOLITE® plastic pipe comes in two specific types, each equally good for its particular purpose. Uscolite CP for high impact resistance, Uscolite RV (PVC) for active oxidizing agents. Not one foot of pipe has had to be replaced in the 10 years since first installed.



USCOWELD* Fittings are the only solvent-weld fittings with an interference fit. Greater joint strength, faster insertion. Non-porous, leak-proof. Made of either Uscolite CP or RV materials.

USCO® VALVES offer a choice of either Hills-McCanna diaphragm valve or Vanton "Flex-Plug" gate valve.

USCOFLOW is a new, black utility pipe, especially suited where low first costs are a factor. It is a blend of styrene-base resin and synthetic rubber for good impact resistance and high tensile strength.

The "Usco" Plastic Pipe Line of precision-molded pipe and fittings for every corrosion and flow problem includes elbows, tees, couplings, flanges, reducing bushings, plugs, caps, nipples, bends.

When you think of plastic, think of your "U.S." Distributor. He's your best on-the-spot source of technical aid, quick delivery and quality plastic pipe and fittings.

*Patent applied for

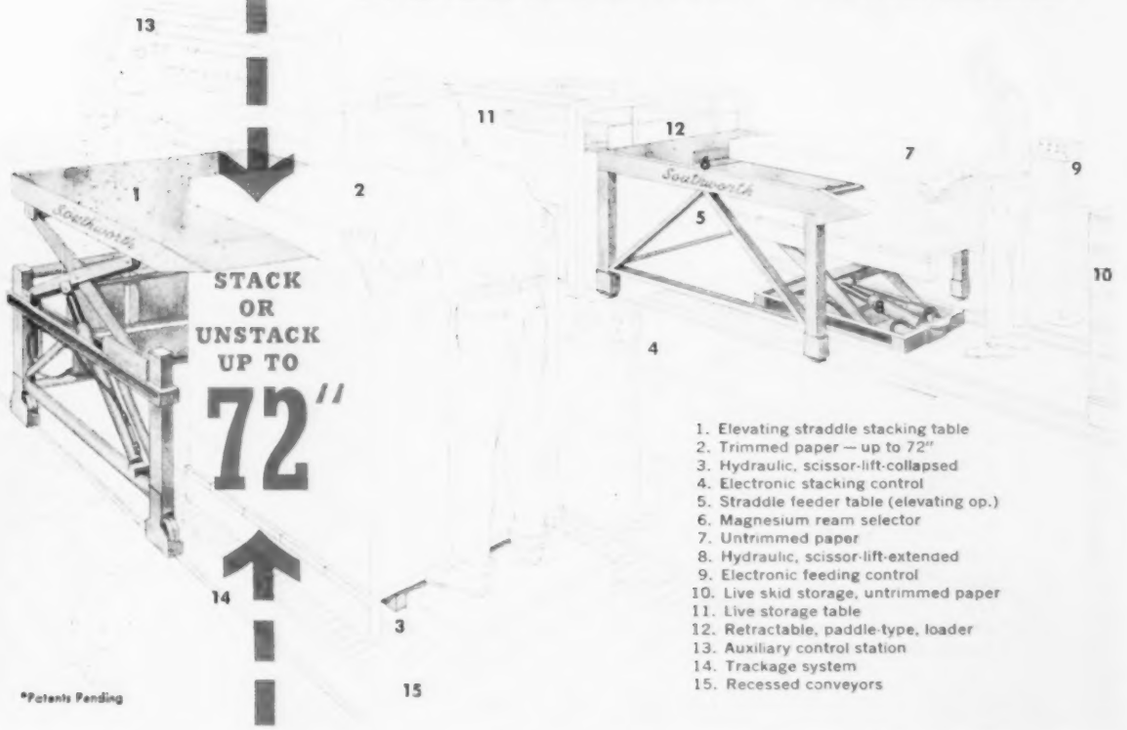
Mechanical Goods Division

United States Rubber

Rockefeller Center, New York 20, N.Y.

In Canada: Dominion Rubber Company, Ltd.

SOUTHWORTH'S NEW
self-elevating
STRADDLE TABLES*



1. Elevating straddle stacking table
2. Trimmed paper — up to 72"
3. Hydraulic, scissor-lift-collapsed
4. Electronic stacking control
5. Straddle feeder table (elevating op.)
6. Magnesium ream selector
7. Untrimmed paper
8. Hydraulic, scissor-lift-extended
9. Electronic feeding control
10. Live skid storage, untrimmed paper
11. Live storage table
12. Retractable, paddle-type, loader
13. Auxiliary control station
14. Trackage system
15. Recessed conveyors

*Patents Pending

minimum capital investment, per pair, pays off in maximum trimmer production engineered to prevent idle time, eliminate manual lifting, conserve floor space 1000 lb. capacity, sheet size 52 x 76 — air film buoyance protects sensitive stock.

What is the present speed at which you can de-skid, feed your mill trimmer, trim, unload and stack as high as 72 inches? For it is that speed which determines to a great extent the efficiency, and in turn the cost, of your finishing room operations.

Would you like to double that speed? Southworth Straddle Tables have done even better in other mills . . . primarily by reducing manual handling to a minimum and by permitting *full time operation of the trimmer, itself.*

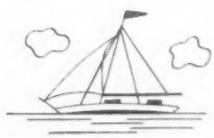
Could the typical three-man layout, illustrated above, be adapted to your mill on a self-liquidating basis? We believe it can. The equipment cost is surprisingly reasonable . . . the installation cost equally low, as no excavating is necessary.

For Details Write or Call Collect:

SOUTHWORTH MACHINE CO.

285 **WARREN AVENUE, PORTLAND, MAINE, SPRUCE 4-1424**

Mfrs. of Paper Conditioners; Automatic Skid Lifts; Lift Tables; Skid Turners; Hand, Foot, Motor Driven Punching Machines; Humidifiers; Envelope Presses; Punch Heads; Tabbing Knives and Corner Cutters plus Custom Built Equipment.



for Cleaner | Softer | more Durable FELTS

USE **d-i LESTOIL** LIQUID DETERGENT

d-i LESTOIL will restore the most heavily soiled felts to the porous, soft condition necessary for the continuous manufacture of paper. d-i LESTOIL is highly effective for washing felts used in the production of all grades of paper. Its cleansing action is thorough either on or off the machine. d-i LESTOIL is useful in the thorough wetting out of new felts.

You profit 5 ways with d-i LESTOIL

1. Improves the cleansing efficiency of felt washing.
2. Starts laundering action immediately because wetting is instantaneous.
3. Penetrates deep into the innermost fibres.
4. Removes ALL soil or residue because cleansing action is complete.
5. Rinses thoroughly — felts are like new, free of all soil.

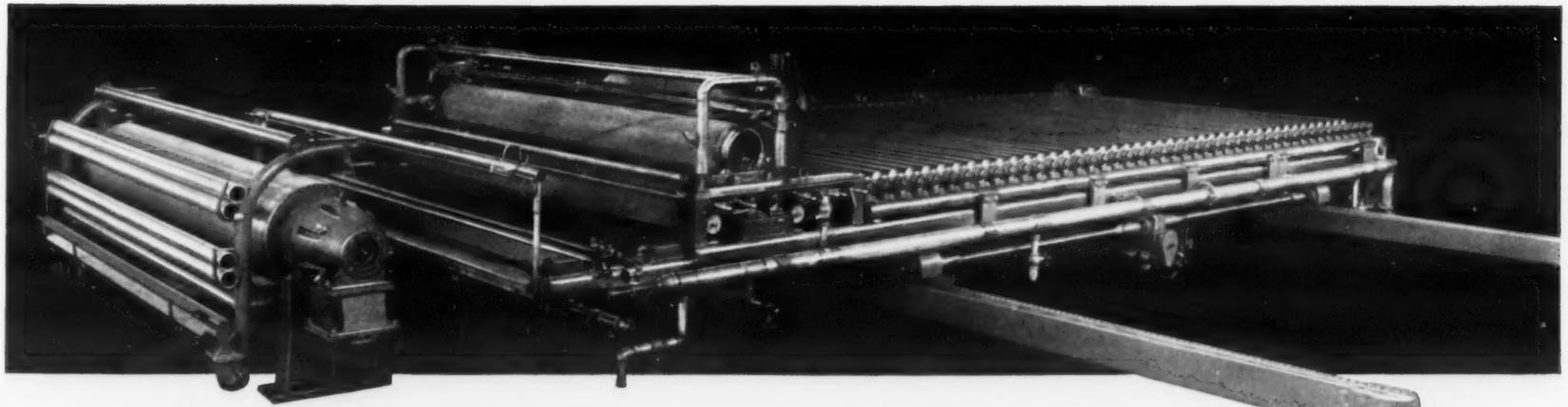
Complete cleansing with d-i LESTOIL makes felts last longer between washings, thus giving better performance and added life. You'll like the continued softness and openness maintained by laundering felts with this effective detergent. You'll like the savings that show up because felt replacement costs stay down — longer runs between washings and production quality are maintained.

NOTE: The same dependable action of d-i LESTOIL can be counted on for producing cleaner, brighter, finer papers when used in pulping and washing processes for removal of ink, grease, wax, asphalt, and adhesives. Clean fibres also help maintain clean felts.

For complete technical information and a generous free sample of LESTOIL write to:

ADELL *Chemical Company*

HOLYOKE, MASSACHUSETTS



Wire Changes are ***FASTER***

WITH THIS MANCHESTER ROLL OUT FOURDRINIER

From hydraulically operated breast roll assembly to cantilevered suction couch, this 130" x 75' Manchester Roll Out Fourdrinier was designed to *consistently* produce top quality papers at low cost.

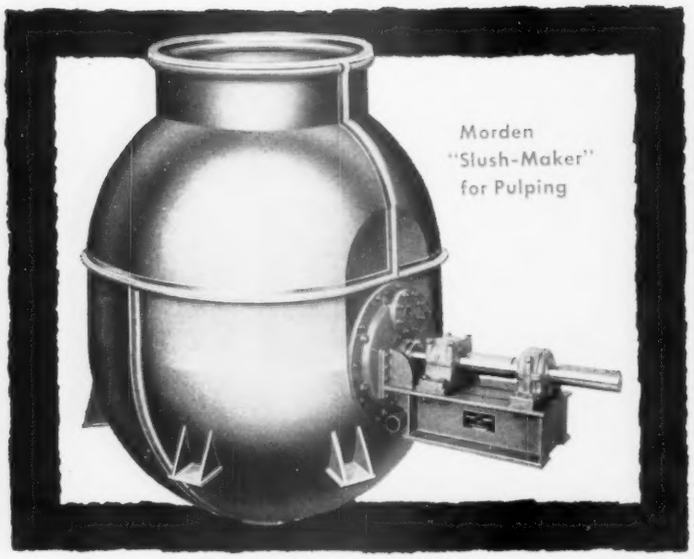
This means simple but precise control of formation, easy maintenance, and *exceptionally fast wire changes.*

As just one example of many advanced design features, the entire dandy roll assembly—including roll, showers, hydraulic motor drive, deckle and trim squirts—can be removed *with only one crane lift.*

See Manchester before you plan your next new paper machine or rebuild. We'll offer you some interesting money-making and money-saving ideas.

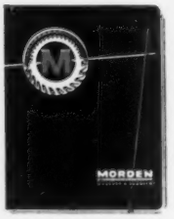
Specialists in Designing and Building Paper Mill Machinery

THE MANCHESTER MACHINE COMPANY / Middletown, Ohio



MORDEN

SPECIALISTS IN STOCK PREPARATION EQUIPMENT



Morden "Slush-Maker" for Pulping

Interested in higher quality production—worthwhile savings in power and labor?. The Morden catalog can give you the answers. Send for your copy today . . . ask us to visit you for an in-the-mill discussion of your requirements.

MORDEN MACHINES COMPANY

3420 S. W. MACADAM AVENUE • PORTLAND 1, OREGON

UNITED STATES REPRESENTATIVES—Northeast: Orton Corporation, Fitchburg, Mass.; **Midwest:** Dan B. Chapman, Appleton, Wis.; **South:** Brandon Sales, Inc., Greenville, S. C.

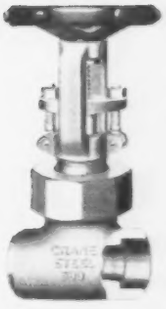
When specifications say "Welded Piping" get everything for the job from CRANE

It is far more satisfactory to get *all* your welding piping materials . . . fittings, flanges, valves, nipples, pipe... from *one* source—CRANE.

Then you're sure of uniform quality. Whether the product is a simple fitting or 24-inch high-pressure, high-temperature valves, Crane controls quality—from raw materials to the finished product.

Each welding type fitting, flange or valve you get from Crane is produced and inspected to established standards—assuring uniform size, wall thickness, and dimensional accuracy—for a good welding job.

One source of supply—from Crane—simplifies ordering, bookkeeping and stock-keeping. Prompt delivery service can be had from Crane's 141 branches, or from wholesalers who serve all areas.



Send for this new Circular of Crane Quality Materials for Welded Piping. Ask for AD-2289.

CRANE VALVES & FITTINGS

PIPE • PLUMBING • KITCHENS • HEATING • AIR CONDITIONING

Since 1855—Crane Co., General Offices: Chicago 5, Ill. Branches and Wholesalers Serving All Areas

it's a snap

Disassemble this pump in less than 10 minutes without disturbing pipe or motor connections

Cut the "down time" for pump maintenance in your mill with this Goulds pump.

You can get at the rotating element in less than 10 minutes. The casing is split diagonally . . . with a hinged cover and jacking bolts to make disassembly easier. This construction saves your time and money by speeding repairs and inspections.

Goulds Fig. 3135 is specially designed for handling paper stock . . . as high a consistency as you can get into the impeller. The pumps are available in a wide range of special metals to resist corrosion.

Other built-in features offer you further savings that come from long life and dependable service. Fig. 3135 is described in Bulletin 723.1. Call your Goulds representative today and ask him for a copy. Or write us.

FOR INSTANCE...disassembly is as easy as this with the Fig. 3135:

Remove the bolts connecting discharge elbow and pump casing (A). To get clearance and save gasket, telescope the discharge elbow into discharge connection by a simple jacking arrangement (B).

Remove bolts connecting upper and lower halves of casing (A). Loosen top nuts (C) and raise upper half casing on hinge pin. Tightening hex nuts (D) raises casing off sideplate locks.

Attach chain fall and continue to raise casing. (On smaller sizes you can swing back the top casing half with a rod or pipe through the cored hole in casing web.)

With pump completely open, remove bearing cap, disconnect coupling and lift rotating element out. And you've not had to break any piping connections—nor move the motor.

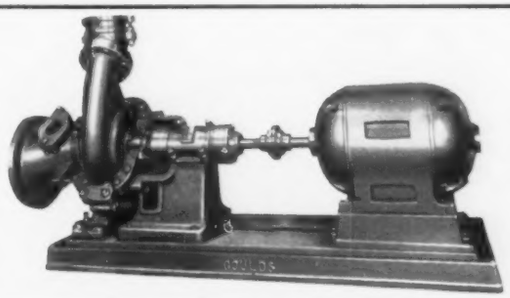


Fig. 3135 Paper Stock Pump

Capacities to 4000 GPM; heads to 215 ft.

GOULDS PUMPS, INC. • SENECA FALLS, NEW YORK

Main Office and Works

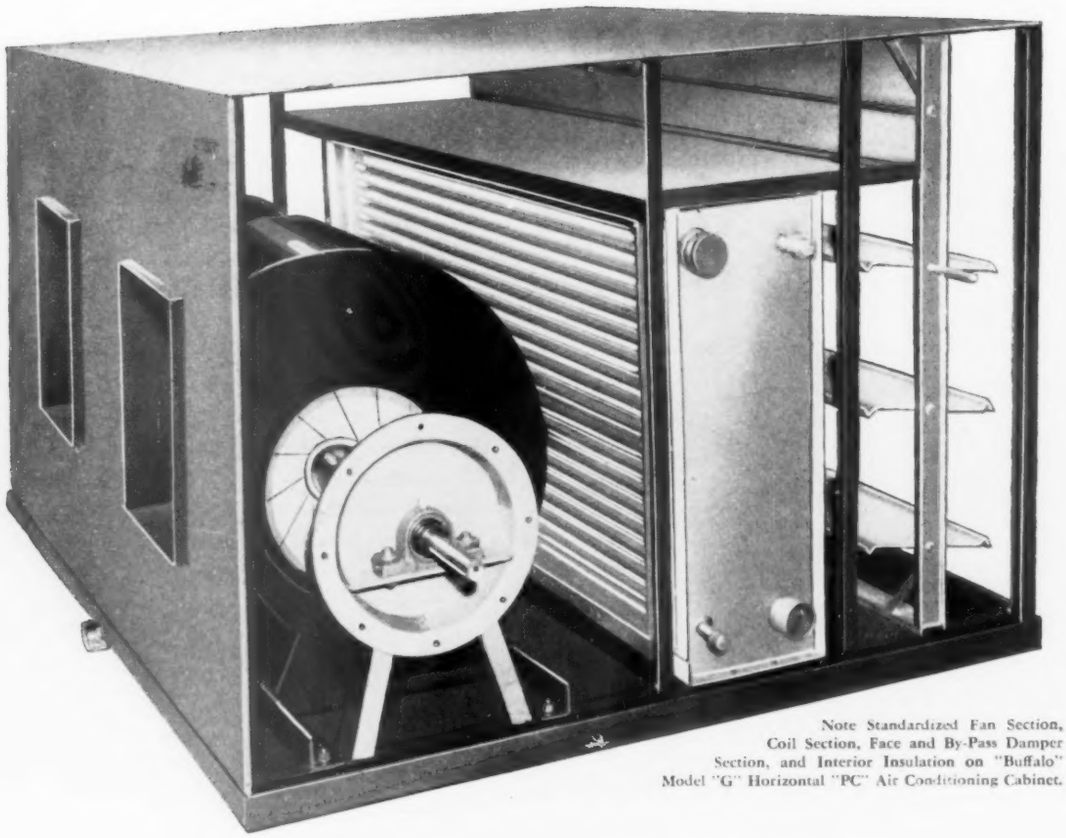
Branches: **ATLANTA**, 15 Peachtree Place, N. W.; **BOSTON**, Room 314, 1330 Beacon Street, Brookline, Mass.; **BUFFALO**, 5475 Main Street; **CHICAGO**, 53 West Jackson Blvd.; **HOUSTON**, 2314 Main Street; **NEW YORK CITY**, Room 1503, 11 Park Place; **PHILADELPHIA**, 2099 North 63rd Street; **PITTSBURGH**, Room 512, Bessemer Bldg., 104—6th Street; **TULSA**, 543 East Apache Street, P. O. Box 6157.

West Coast Representative: GOULDS PUMPS Western, Inc., 1919 N. W. Thurman St., Portland 9, Oregon

In Canada: The A. R. Williams Machinery Co., Ltd. . . . in all principal cities.

GOULDS

PUMPS FOR THE PULP AND PAPER INDUSTRY



Note Standardized Fan Section, Coil Section, Face and By-Pass Damper Section, and Interior Insulation on "Buffalo" Model "G" Horizontal "PC" Air Conditioning Cabinet.

ARE YOU TAKING ADVANTAGE OF THESE "BUFFALO" AIR CONDITIONING CABINET FEATURES?

1. Easier to Install — simplified knock-down "panel" construction makes the "Buffalo" "PC" Cabinet easier to move through standard building openings than competitive designs.

2. Wide selection of combinations — simple ventilation to complete air conditioning, including cooling and dehumidifying, reheating, tempering, humidifying and air cleaning all year around. All functions including dampers may be automatically controlled.

3. Space-Saving Designs — Choice of horizontal or vertical models, to save productive floor space under the most congested conditions.

4. Complete range of capacities — units available in sizes from 875 to 22,000 cubic feet of conditioned air per minute.

5. Attractive Appearance—Clean-cut, streamlined cabinet design is unobtrusive, presents good appearance.

6. Rugged, reliable, highly efficient — quiet, stable operation over a wide range of capacities and pressures is assured by the specially-designed wheel and blower head. Because these wheels are light-weight, and are mounted on an oversize hollow shaft, high static pressures can be obtained without approaching critical speeds — and with a minimum of vibration. Rigid, sturdy construction insures economical, dependable maintenance-free performance.

These "Q" Factor features of "Buffalo" Central Air Conditioning Cabinets add up to complete satisfaction. The "Q" Factor, of course, is the built-in QUALITY that provides trouble-free satisfaction and long life in every "Buffalo" product. For full information contact your nearest "Buffalo" engineering representative, or write for Bulletin AC-120.

BUFFALO FORGE COMPANY • Buffalo, New York

Buffalo Pumps Division, Buffalo, New York

Canadian Blower & Forge Co., Ltd., Kitchener, Ont.

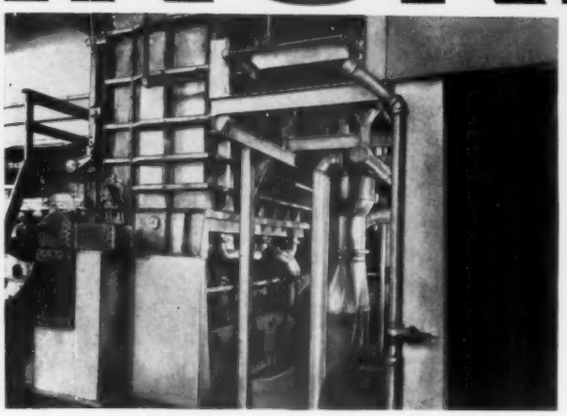
VENTILATING AIR CLEANING AIR TEMPERING INDUCED DRAFT EXHAUSTING FORCED DRAFT COOLING HEATING PRESSURE BLOWING

World-famous Radio City Music Hall Rockettes

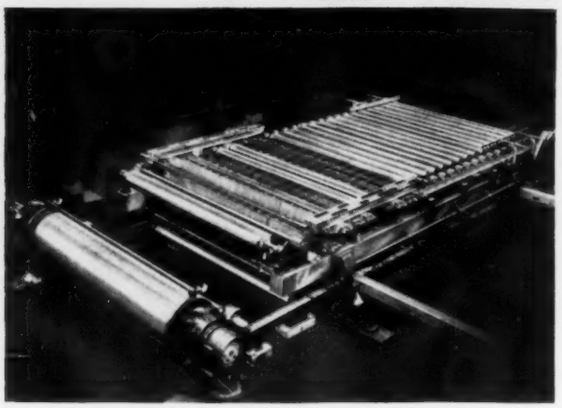
PUGET PULP IS UNIFORM

PUGET SOUND PULP and TIMBER CO.
BELLINGHAM • WASHINGTON

INCREASE

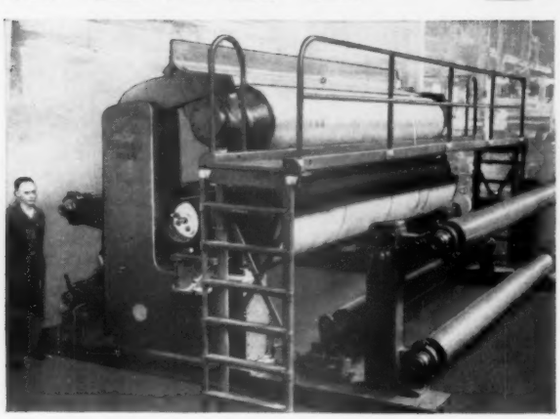


FLOW CONTROL UNIT with multiple manifold distributor and recirculation. This unit gives improved uniformity of delivery into the pond, and together with the specially designed slice gives the optimum in uniform profile, all this at stepped-up speeds.

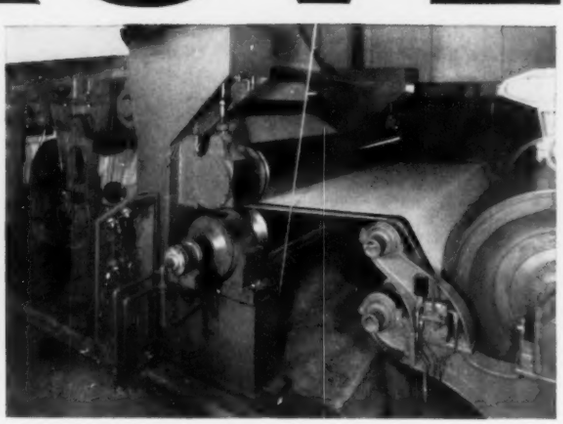


FOURDRINIER. The Sandy Hill removable fourdrinier permits varying components for making the entire range of fine papers. Structurally strong, simple in design, it requires least man-power motion and involves least hazard to wire during wire changes.

IMPROVE



SUCTION PRESSES — Hydraulically operated suction presses are available designed for pressures up to 1,000 pounds per linear inch of nip.



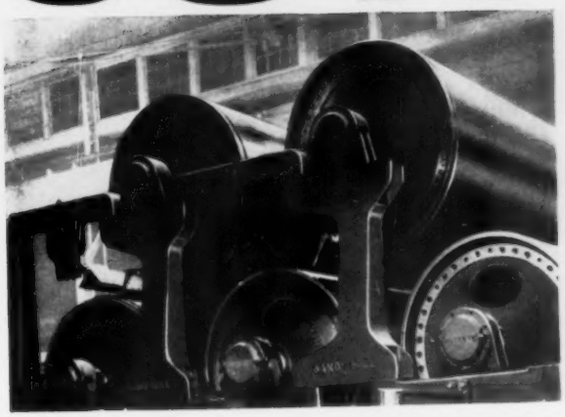
BREAKER STACKS — Properly located in the dryer section, this Breaker Stack insures best results in compacting the sheet and final fiber migration control. Designed for high nip pressures, it operates successfully on high grade printings.

Replace obsolete equipment with Sandy Hill specialties

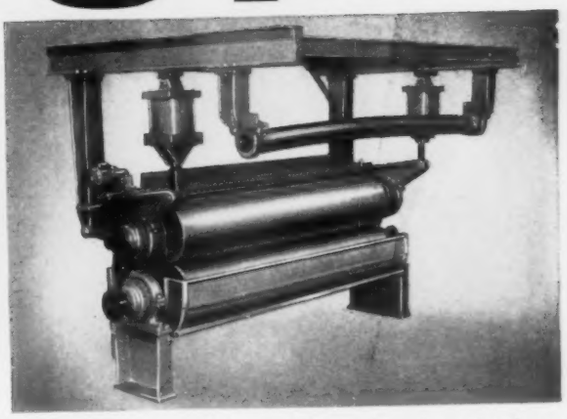
In many mills throughout the country Sandy Hill components are replacing obsolescent equipment at critical points in paper machines. Specially designed and engineered for efficient operation, this Sandy Hill equipment has resulted in increased speeds and improved quality of product.

Shown here are a few of the Sandy Hill specialities, adaptable to existing machines. Let us tell you more about them. At your invitation, a Sandy Hill Sales Engineer will visit your plant and offer a sound plan for machine improvements to keep your mill abreast of the increasingly competitive market.

OUTPUT



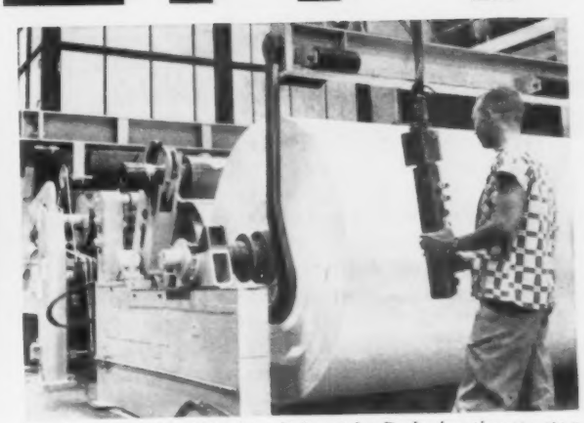
DRYERS — The Dryer Section, often the bottleneck in a modernized paper machine, is no problem when an additional nest of Sandy Hill Dryers is installed. Sandy Hill's pressure tested Dryers have more capacity per unit, so that a smaller number of Dryers meets the requirements for speeded-up production.



SIZE PRESSES — Installed on existing machines by moving dryers, these Size Presses give improved performance in sizing or pre-coating high grade papers. Overhead loading and rolls that withstand chemical action are features.

QUALITY

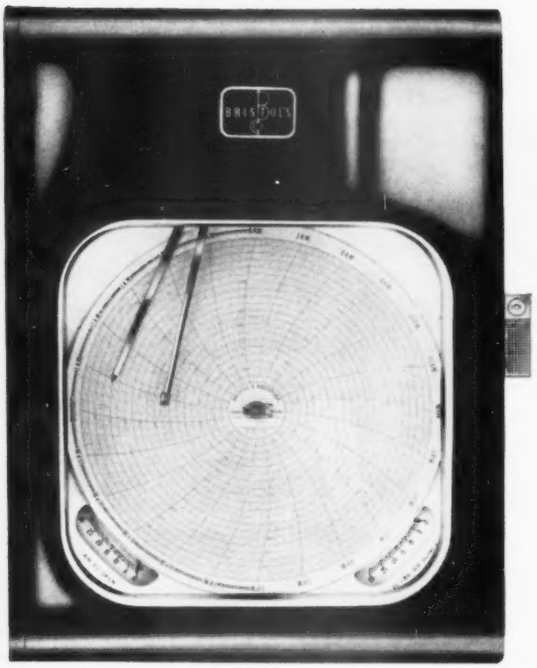
SELECTIVE DRIVE — Increased range and control of draw, economy of space and maintenance, and unvarying draw between sections are recognized features of the Sandy Hill Selective Drive.



REELS — Sandy Hill offers lightweight Reels for tissues, etc.; standard Pope type Reels for most types of paper; and hydraulically controlled heavy Reels for board or heavy pulp.

IMPORTANT: The first sections of our Centennial Catalog are now coming off the press. Write us now for your copies. Address Box D.

THE
SANDY HILL
IRON AND BRASS WORKS
HUDSON FALLS, N. Y.



Your newest man can operate and maintain this controller

He'll catch on quick to the Bristol Series 500 Controller without a complicated, lengthy training period.

In fact, your plant can have Bristol Series 500 Controllers, even if you don't have a formal instrument department at all. Many small instrument users are doing this today. Yet the 500's performance is such that one of the largest, most widely known chemical companies in the country just bought seventy 500's for its exacting processes.

Here are the big reasons the 500's a favorite with all instrument users, both large and small: (1) Basic simplicity of the operating mechanism; (2) Bristol measuring elements insure the utmost accuracy.

Another big simplification: You can exactly calibrate the Series 500 Controller with only one single adjustment, even after complete disassembly and reassembly with replacement of parts.

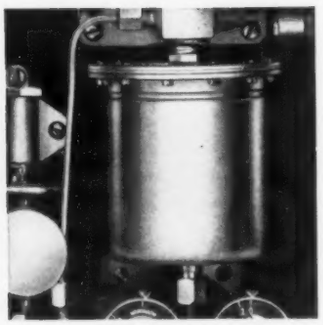
Get complete data on Bristol Series 500 Pneumatic Controllers now, before you order another instrument. Write for bulletin A 130, The Bristol Company, 142 Bristol Road, Waterbury 20, Conn. B-19

Several hundred standard models meet every process requirement including:

These problems:	These operating modes:
1. Cascaded control	1. Fixed narrow band (on-off)
2. Selective control	2. Proportional—to 100% and to 30%
3. Ratio control	3. Reset with wide band—to 400%
4. Time program control	4. Derivative (rate)
5. Pneumatic Transmission	5. Reset plus derivative

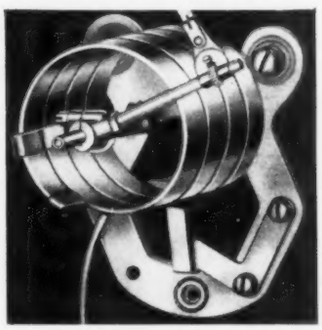
BRISTOL TRAIL-BLAZERS IN PROCESS AUTOMATION

AUTOMATIC CONTROLLING, RECORDING AND TELEMETERING INSTRUMENTS

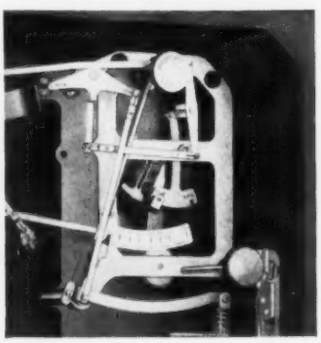


Reset Action Stops (in cylinder), another Bristol exclusive on reset models.

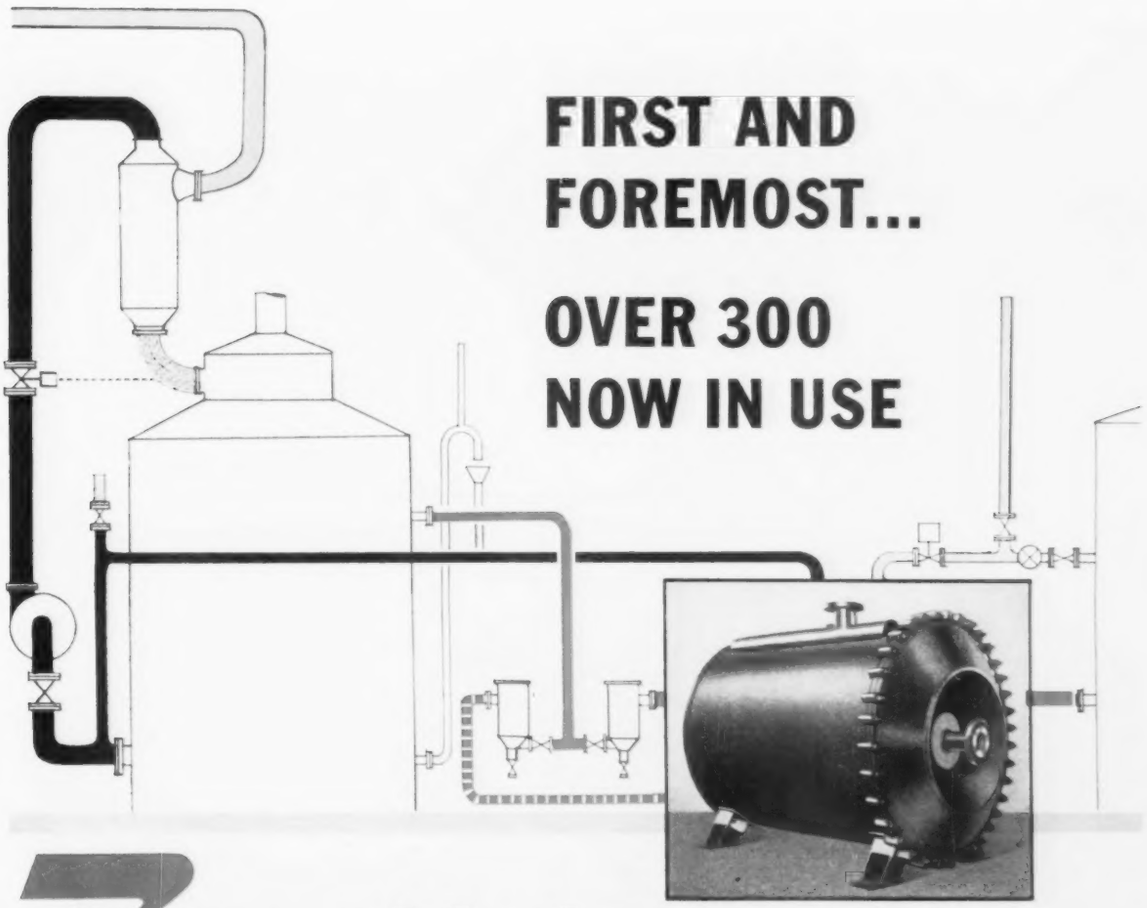
Zero Derivative Setting, exclusive with Bristol on derivative models.



Precision Bristol Measuring Elements insure accuracy.



Built-in Calibration assures permanent accuracy of controller action.



FIRST AND FOREMOST...

OVER 300 NOW IN USE

Rosenblad BLOW STEAM, TURPENTINE, AND RELIEF GAS HEAT RECOVERY SYSTEMS

Advantages:

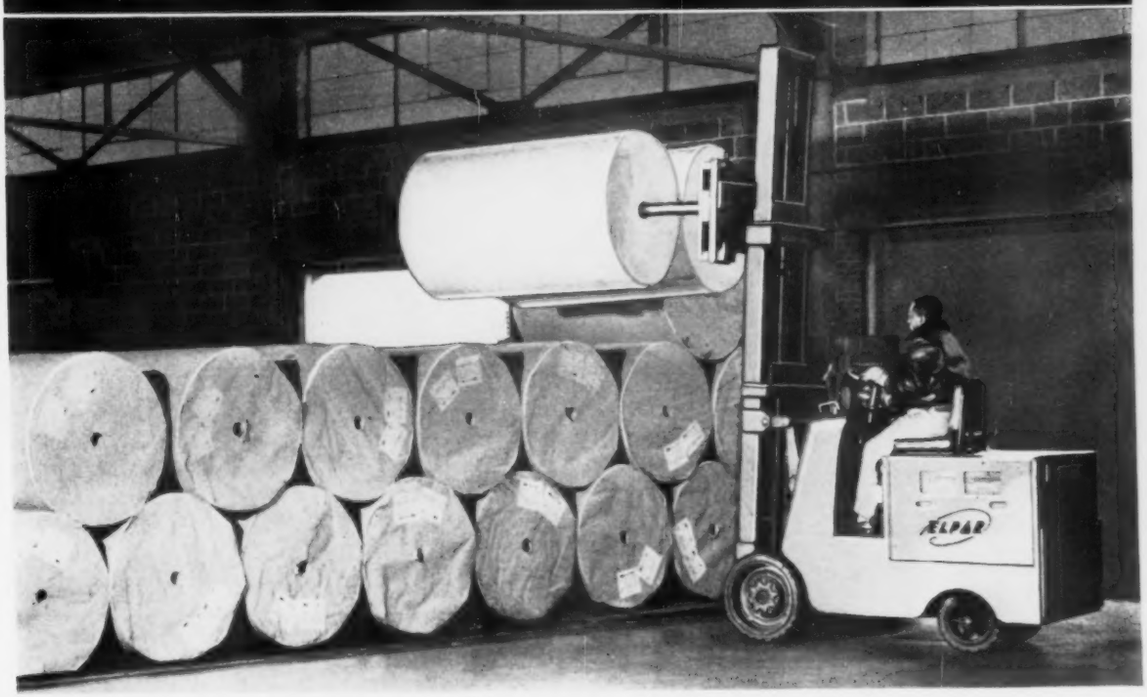
- There are no peak demands on the fresh water supply system as exist when a surface condenser is used to condense the blow steam.
- The heating surface required in the heat exchanger is substantially less than that required for a surface condenser, since the latter must have sufficient surface to condense a peak load.
- Spiral Heat Exchangers (manufactured exclusively by Rosenblad enterprises) are used instead of conventional exchangers of tubular design. The Spiral Exchangers eliminate fouling from fibers and other solids, incorporate long passes and full counter flow, and induce turbulence for excellent scrubbing of the heating surface.

The first efficient blow-steam recovery system: In the Rosenblad system, the blow-steam is condensed in a spray condenser. The hot condensate, at optimum temperature, is accumulated in the upper part of a large storage tank. From here, it is pumped through a heat exchanger, at a steady rate, to heat fresh plant water flowing at a steady rate. The cooled condensate from the heat exchanger is returned to the lower part of the storage tank, to be used for condensing the next blow.

In 1930, a basic patent was granted to Rosenblads for a system to recover waste heat at a steady rate from intermittent discharge of very large volumes of blow-steam. As innovators and pioneers in this field, we would be happy to offer our experience in helping you obtain optimum recovery of waste heat, whether you are planning a new system or intending to increase the capacity of your present blow-steam system. The Rosenblad system can be used in both sulphate and sulphite processes.

ROSENBLAD CORPORATION 1270 Sixth Avenue, New York 20, New York
6999 Cote des Neiges Rd., Montreal 26, Quebec

ELPAR ELECTRIC TRUCKS...



Save $1,200 Per Truck Per Year

Cost surveys made at a number of plants reveal that ELPAR electric trucks cost one-third less to operate and maintain than comparable gas models. Based on 2,000 hours of operation, this means an average saving of more than $1,200 per truck per year.

In addition, ELPAR electrics give twice as many years of dependable service as gas trucks operating under similar conditions. Thus, when *all* initial and replacement costs are added up, ELPAR electric trucks actually cost *less* to buy.

And, the surveys show that average downtime for ELPAR electrics is 2 to 3% while that for gas trucks is 10 to 15%.

More and more companies are converting their fleets to dependable, fume-free ELPAR trucks. Join the trend. Choose from our complete line of fork and ram trucks, low lift and high lift platform trucks, and mobile cranes—and save on *first* cost and *operating* cost. Get all the facts. . .

WRITE FOR YOUR COPIES
of the ELPAR *Lift*, "Gas vs. Electric Trucks" and "LP-Gas vs. Electric Trucks."

ELPAR
ELECTRIC TRUCKS

THE ELWELL-PARKER ELECTRIC COMPANY
4546 St. Clair Avenue • Cleveland 3, Ohio

Twice the Life . . . 1/3rd the Operating Costs

GENERAL CHEMICAL

ALUM

Where you want it... As one of America's major producers of both dry and liquid aluminum sulfate, General Chemical has strategically located plants from coast to coast—assuring you of dependable, near-by supply almost *anywhere* in the U. S. and Canada.*

As you want it... "GC" Alum has met the most rigid specifications for more than 50 years. In both dry and liquid forms, it is first choice of most industrial and municipal users—who know they can count on General for the uniform high quality they need.

When you want it... General Chemical is geared to supply fast service at *all* times. This can be especially important when emergencies loom.

Add them up! Near-by service and supply . . . quality and dependability . . . speed. You get them all from General Chemical! Call your nearest General Chemical sales office listed below for further information.

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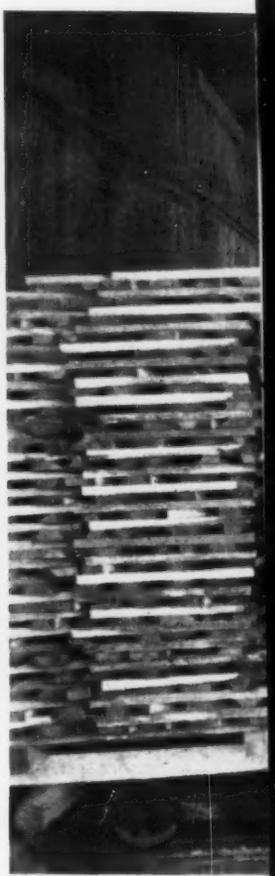
"OUR FORD TRACTOR DOES THE WORK OF 6 MEN...



solves a difficult material

EFFORTLESS SPOTTING AND STACKING—Ford Tractor with fork lift makes easy work of moving heading blanks from mill to storage yard for air drying. Blanks are stacked two pallets high with 600 to 800 blanks—up to 4,000 lbs.—on each pallet. Pallets later are moved to kiln and then to factory for processing. Compare this operation with all the separate loading and unloading jobs required when hand labor was used at mill, in storage yard, at kiln and at factory!

ECONOMY WEARS MANY FACES—"There are a dozen different ways we can figure our savings with Ford," says Mr. Wrape. "There's the amazingly low amount of fuel used, and the easy, low-cost service and maintenance. There's the time and manpower saved on every loading or stacking job. And don't forget, we've saved the cost of improving the surface in our yard. The use of Ford Tractors is more than a profit factor with us; we had to mechanize for business survival."

handling problem"

says Robert L. Wrape, partner, Wrape Heading Company, Paragould, Arkansas.

Mr. Wrape and his father, Robert F., are partners in one of the country's pioneer barrel heading factories, a business founded by an uncle in 1875. The manufacture of barrel heads for the bourbon and food packaging industries requires a tremendous amount of material handling as logs, blocks, bolts, heading blanks and finished heads are moved in and out of mill, storage yards, drying kiln and factory. Until 1950 the company relied entirely on hand labor, horse teams and wagons.

"We bought our first Ford Tractor in 1950—3680 work hours ago—and added a second last year," says Mr. Wrape. "Used with fork lift and crane, they've revolutionized our operation. The Ford Tractor has done everything asked of it—and more.

"One man with a tractor now does the work of 6 to 7 men in our old operation. It releases men from dirty, tiring loading and stacking jobs they all dislike. And our Fords keep right on operating, good weather or bad. They don't tear up the ground—keep working easily in our unimproved yards even during a wet summer."

The Wrape Heading Company is only one of many big and small industries which have found Ford a valuable partner in saving time, saving labor and saving money. For details on how Ford Tractors and Equipment can do the same for you, talk to your nearby dealer, or write to Industrial Sales Department, Tractor and Implement Division, Ford Motor Company, Birmingham, Michigan. Ask about Ford's outstanding value features, including choice of diesel, gasoline, or LP-Gas models, power steering, 12-speed mobility, "live" action hydraulic system, and many others.

YOU SEE MORE FORDS BECAUSE THEY SAVE MORE MONEY!

Get efficient loading on any footing

...in any weather...with a one-man "crew"

You "semi-skid" with no strain on the tractor, let big, heavy-duty skid-shoes be the "buffers." Impact forces of rough-ground travel are gentled 67% or more by patented, shock-swallowing Hydro-Spring!

With selective precision dumping control you release logs one at a time or all at once. Top grab-arm is controlled by a third valve of the hydraulic system. This valve is standard equipment and can also be used to control rear-mounted road-working equipment.

In snow three feet deep with pulpwood piles frozen tight...or in rain-soaked woods with stocks mudded-in ...in any weather...on any footing...the sure-going International Drott Skid-Grapple can give you top pulpwood loading efficiency. You need only a one-man "crew" to make big cash savings. Many owners report saving more than $1.00 per cord on production costs with a TD-9 Skid-Grapple.

You just push the Skid-Grapple's lower prongs under the frozen or mudded-in wood piles. Then, clamp onto the load securely with the exclusive top grab-arm. Now, apply patented triple-power pry-over-shoe break-out action together with ground level roll-back.

Using lift-frame mounted skid-shoes, you "semi-skid" the big grapple loads over any soil or terrain condition quickly, easily, and at low cost to truck or pile. Here again, positive, grab-arm load control speeds unloading, lets you release all the wood at once or a "stick at a time."

See how exclusive TD-9 Skid-Grapple advantages let you load up to 240 cords daily! There's an International Drott Skid-Grapple size to fit your pulpwood loading operation. See your International Drott Distributor for a demonstration of the size you need.

International Harvester Company, Chicago 1, Illinois
Drott Manufacturing Corp., Milwaukee 15, Wisconsin

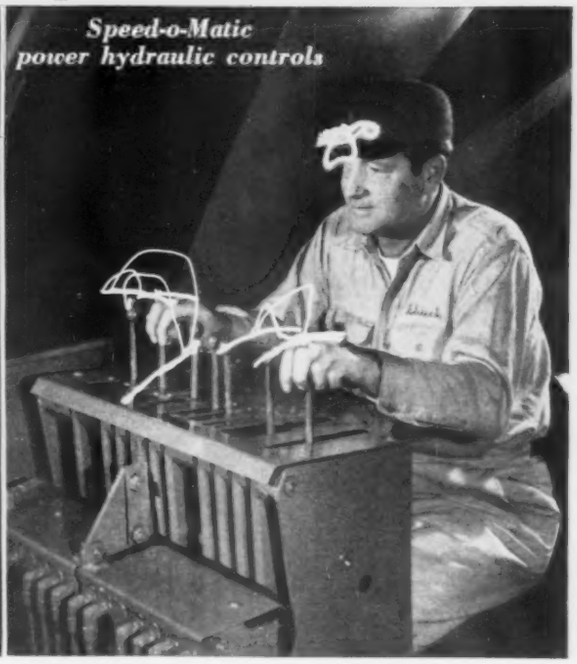
INTERNATIONAL HARVESTER

INTERNATIONAL®
DROTT®

Time-light camera shows!

Which lifting crane produces more ?

Follow the light lines. They show the "long reach" moves an operator makes with conventional controls to complete a hoe cycle, then shift from swing to travel, steer right and left and shift back from travel to swing. (Operator makes similar moves in crane work.) Such "arm's-length" work with slow mechanical or booster systems adds seconds to every move, drains operator strength, cuts end-of-the-shift output.



No reaching, no yanking . . . just easy, "keyboard" operation with Speed-o-Matic controls and Independent-Swing-and-Travel when performing the same operations as the hoe with conventional controls. Operator moves hands and fingers, not his whole body. Short-throw levers speed cycles, up output, conserve operator strength. Ask the man who has worked both controls. He'll pick Speed-o-Matic every time!

Speed-o-Matic power hydraulic controls increase output by decreasing cycle time and reducing operator fatigue

Pushing a lifting crane at its highest limit all shift long is easy with Speed-o-Matic power-hydraulic controls.

And Speed-o-Matic—standard on all Link-Belt Speeder lifting cranes—is the original fingertip, flick-of-the-wrist system.

Hydraulic pressure assures the same fast, smooth response *all day*, without adjustments . . . and with perfect feel of the load at every lever position.

And Speed-o-Matic power-hydraulic controls are only one of the many Link-Belt Speeder advantages. Others include—

- GREATER USABLE HORSEPOWER
- FULL-FUNCTION DESIGN tailors the machine to the job . . . permits more standard and optional features such as Independent-Swing-and-Travel.
- BONUS CRANE CAPACITY when using long booms at extended radii.

For complete details on why your best lifting crane investment is a Link-Belt Speeder, contact your distributor or write LINK-BELT SPEEDER CORP., Dept. PP-558, Cedar Rapids, Iowa, for book 2553.

14.790-A

LINK-BELT SPEEDER

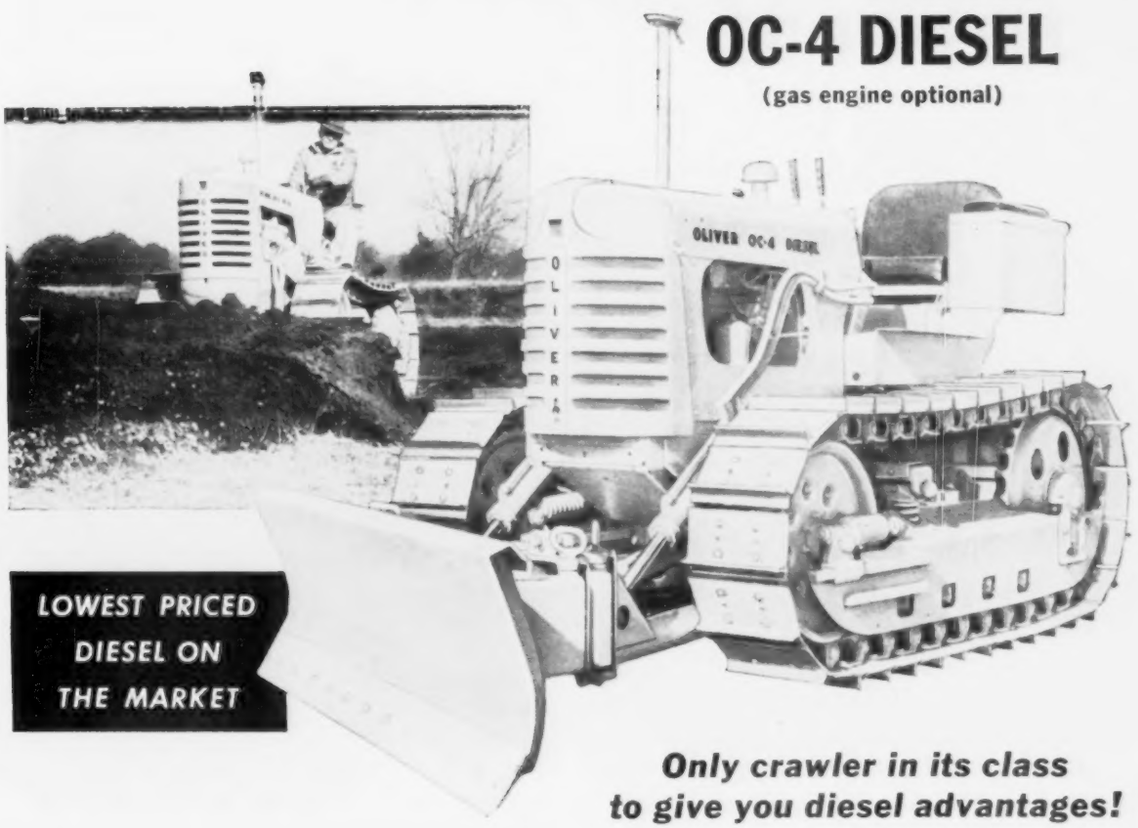
It's time to compare . . . with a Link-Belt Speeder

Diesel down your costs

—with the New OLIVER

OC-4 DIESEL

(gas engine optional)



LOWEST PRICED DIESEL ON THE MARKET

Only crawler in its class to give you diesel advantages!

Now you have it! Diesel power in a compact, all-purpose crawler—the top-regarded Oliver OC-4. Now you can dieselize your small tractor operations, get dollar-earning economy in those countless jobs where the OC-4 is sized right to do them better...and where it's wasteful to tie up larger rigs.

See what you get!

- For the first time, modern diesel power in a compact, proved crawler tractor.
- 4-cycle, 130-cubic-inch displacement, 29.5 h.p.* electric starting diesel—fewer moving parts and therefore less wear, less maintenance. Lower costs all ways!
- Priced low—you can profit from an OC-4 now.
- Deluxe engine features: overhead valves; dry, precision cylinder sleeves; pressurized cooling; simple, single fuel injection pump; two-stage fuel filtering; solenoid starting; precision-balanced rotating parts; effective air cleaner; high-torque performance.
- "Travel-Reverser" transmission—for same speed reversing in any gear setting. (Optional.)
- "Slo-Low" auxiliary transmission—for 50% speed reduction, forward or reverse, in any of the four gear ranges. (Optional.)
- Special loader model designed strictly for loader work. It's faster!
- Also, new gasoline-engine-powered OC-4.
- Mounts job-matched attachments for wide work range.

*Manufacturer's tests

See and try the OC-4, diesel or gasoline powered—the lowest priced, full ability crawler of its size!

OLIVER **THE OLIVER CORPORATION**

Industrial Division

19300 Euclid Avenue, Cleveland 17, Ohio

a complete line of industrial wheel and crawler tractors and matched allied equipment

One of the most intensive studies of forest site preparation ever made was conducted last year near Brunswick, Ga. The study, undertaken by Caterpillar Tractor Co. and the Brunswick Pulp & Paper Co., covered various phases of site preparation over a period of three months. Four Cat Diesel Tractors with matching Rome Offset Disc Harrows were used on the harrowing operation.

The tests on harrowing were conducted under widely varying conditions. For example, a D4 and a D7 worked areas containing partially burned light palmetto and scattered stumps up to 10″ in diameter. A D8 and a D9 worked areas which were not burned and contained heavy palmetto, stumps ranging up to 18″ in diameter and scattered standing trees. Production results of single pass discing these areas were outstanding. In another test, a D8 worked an area of dense palmetto interspersed with a scattering of old stumps with diameters up to a maximum of 14″. The treatment: two discings at right angles, with the D8 delivering high production in third and fourth gear range.

See your Caterpillar Dealer for complete information on the harrowing operation as well as other phases of the studies such as: raking and windrowing, stump clearing and cutting, stump treatment and chaining.

Caterpillar Tractor Co., Peoria, Illinois, U. S. A.

CATERPILLAR

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HEAVY-DUTY WOODS EQUIPMENT FOR THE HARD WORK

How to handle 4800 cu. ft. of LOGS and CHIPS per hr.

The use of WEBSTER Conveyors helped solve this problem in the 1957 addition to the Harriman, Tenn., plant of The Mead Corporation.

The above two photos show the receiving log conveyor and the conveyor from barking drum to chipper. They handle 30 units per hour at chain speed of 100 F.P.M. Each unit contains 160 cu. ft. and weighs about 6,000 lbs. Photos at left show the bucket elevator and belt conveyors for handling wood chips at capacity of 9,000 cu. ft. per hr.

WEBSTER Conveyors have proved their ruggedness and dependability in many prominent pulp and paper mills throughout North America. We would be pleased to work with your engineers in solving your log and chip handling problems. Write today—no obligation.

WEBSTER MANUFACTURING, INC.

Dept. PP-58, Tiffin, Ohio, U.S.A.

Offices in All Principal Cities

Webster

SINCE 1876

BULK MATERIALS HANDLING EQUIPMENT

GROWING USE OF SAWMILL WASTES continues as significant development in pulpwood industry. More than 4 million cords of slabs, chips, etc., were consumed in 1957.

Pulpwood Is Going to Chips

but there are definite limitations in each region. Total roundwood production was 35,782,602 cords for 1957. Chips, slabs: 12%

By W. S. BROMLEY
Executive Secretary,
American Pulpwood Assn.

● If there was anything remarkable about pulpwood in 1957 it was its over-all stability and the increasing utilization of sawmill and other wood leftover or waste material.

Consumption dropped less than 1% to 35,662,000 cords, 87,000 cords less than the 1956 peak. Most of this drop occurred in the Northeast and Lake States. The Southern mills showed essentially the same annual consumption while pulpwood use increased about 1% for the Western mills.

Pulpwood inventories in general remained higher than usual throughout the year, increasing about 8% from 6,228,000 cords at the start of the year to over 6,700,000 cords by year end. All of this increase was in the Northeast and Lake States and the West while inventories decreased in the South.

Since inventories increased during 1957, it is clear that receipts of pulpwood were in excess of consumption; this was true every month of the year except April, May, June and November. Only in the Lake States and Northeast regions was there a clear-cut drop in receipts, particularly during the last half of the year.

The most significant development continues to be the increasing utilization of mill and woods leftovers. It is not feasible statistically to get a measure of the increasing utilization in the woods of all trees felled or knocked down. We do see, however, from the statistics collected and distributed by APA how the use of mill leftovers increased during a year that saw a light drop in over-all consumption. By quarters, this development can be noted in the tables given below:

The West still consumes more than twice the volume of total chips, slabs and other leftovers used by all other regions. Its commanding lead is certain to be challenged in the next year or so as Southern mills get into fuller use of this raw material.

This increasing use of chips, slabs and other mill leftovers has a significant impact on the wood procurement programs of pulp mills for "roundwood." Increased receipts of this material in 1957 forced the pulp mills to cut their quotas for roundwood by about 5% by the last quarter. This

W. S. BROMLEY, APA's Exec. Secy., makes authoritative analysis of one of most important trends in wood supply for this industry.

does mean a saving to the overall industry of about that much manpower but probably has resulted in putting some producers and dealers out of business and forced others to operate on reduced quotas of delivery to the pulp mills.

Will Know More About South

This is only a temporary condition which will certainly level off in a year or so when we know that the most accessible and most operable chip sources in the South and East will have been tapped, and as total consumption of wood again increases.

At that time, it is very likely that further expansion of pulpwood consumption will involve increased use of

TABLE NO. 1

U. S. Receipts of Chips, Slabs & Other Leftovers in 1957

Material	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
Softwood					
Chips	695,125	958,987	1,001,062	1,128,386	3,783,560
Slabs	142,283	98,791	87,499	85,830	414,403
Hardwood					
Chips	17,537	14,603	15,910	24,990	73,040
Slabs	11,585	19,820	13,998	16,515	61,918
TOTAL	866,530	1,092,201	1,118,469	1,255,721	4,332,921

TABLE NO. 2

Comparison With Total Receipts of All Classes of Pulpwood in 1957

Class	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
Total Receipts	9,519,635	8,349,952	9,066,799	8,846,216	35,782,602
Total Chips, Slabs, etc.	866,530	1,092,201	1,118,469	1,255,721	4,253,967
Percentage of Chips, Slabs, etc.	9%	13%	12%	14%	12%

TABLE NO. 3

Receipts of Chips, Slabs, etc. by Regions—1957

Region	First Quarter Volume Cords	First Quarter % Total° Reg. Rec.	Fourth Quarter Volume Cords	Fourth Quarter % Total° Reg. Rec.	Total for Year Volume Cords	Total for Year % Total° Reg. Rec.
Northeast	20,416	1%	28,638	3%	104,107	22%
North Central	164	—	1,377	—	3,173	—
South Atlantic	68,800	2%	110,998	4%	349,576	3%
South Central	133,533	6%	191,236	10%	683,256	8%
West	643,617	42%	923,472	50%	3,192,809	43%

° Percentage of total regional receipts.

TABLE NO. 4

Current & Potential

Class Wood	Rec'd. 1957 Cords	Rec'd. 1957 %	Potential 1965° Cords	Potential 1965° %	Increase by Class of Wood
Roundwood; i.e., logs, bolts	35,783,000	89%	45,038,400	85%	9,255,000 cords
Chips, Slabs, etc.	4,333,000	11%	7,761,600	15%	3,429,000 cords
TOTAL	40,116,000	100%	52,800,000	100%	12,684,000 cords

° Using Department of Commerce Estimate for Total and Stanford Research Institute estimates of the probable distribution by classes.

roundwood in about the same, or at a greater rate than chips, slabs or other material can be used.

The current rapid growth of increased use of this material is a healthy development but it will have definite limitations. Its use cannot possibly cut into the overall use of roundwood for more than a few years. If there is any doubt on this point one should study carefully the figures of the Stanford Research Institute Report on "America's Demand for Wood." This is done in Table No. 4 which also uses the recent Department of Commerce estimate of a need for 52,800,000 cords of pulpwood in 1965.

In presenting Table No. 4, it is realized that the potential shown is the greatest of several estimates, but even on this basis, it should be clear that the potential expansion of use of sawmill leftovers is definitely limited. This is an important adjustment to the industry and long overdue, but it would be a gross mistake to assume the expanded use of chips, slabs, etc., will replace or even threaten the dominant place that roundwood has and will always have.

If it ever became practical to chip roundwood in the woods or at concentration yards or chipping mills, the movement of roundwood to the mills would undergo a radical change. Such a radical shift in procedure is still in the experimental or pilot plant stage. Even if chipping roundwood before it gets to the pulp mills proves successful, chips are still not likely to replace roundwood as the dominant form of wood being delivered to pulp mills during the next ten years.

By regions, the limited shift to chips varies appreciably between Western and Eastern mills. Even in the West where chips presently exceed roundwood in volume, mills should not lose sight of the fact the current favorable position of the West in using chips, slabs and other mill leftovers will persist as long as the virgin timber is being operated. When the Western sawmills complete their first cycle of cutting and have to draw upon sounder, thriftier stands of timber, less cull trees and cull portions of logs, tops and branches will be available for pulpwood chips. Then, roundwood or "farmerwood" in the West will assume increasing importance and chips a decreasing role.

In the South and other forest regions east of the Rockies the use of mill leftovers can never equal the volume or the significance it has on the West Coast.

The pulpwood industry is going to chips and it's good for our forest resources and our pulpwood-consuming mills, but let us not lose sight of the limitations which such a development has in each forest region. Remember that the saturation point on mill leftover utilization may well be reached in each region during the next ten years. During this period, the major portion, at least 80% nationally, of the demand for pulpwood will continue to be filled by pulp logs, or pulpwood bolts, i.e., in roundwood form.

Midwest Chemical Control Of Fires To Be Demonstrated

The first midwest conference on fire control with chemicals for forest areas will be sponsored by Michigan Tech on May 12-13, at Baraga, 30 mi. south of Houghton, Mich., says U. J. Noblet, head of the college's school of forestry. U.S., Wisconsin and Michigan forest services and agencies are cooperative.

Sodium calcium borate, a recently developed chemical for fire fighting, will be used for demonstrations. Various types of forest and wild-land areas will be fired so comprehensive tests can be made, he said. Foresters will use both air-borne and ground tankers to extinguish the fires.

More Trucks and Rail Cars Needed

in near future, according to newly released APA survey data

In an original survey–first of its kind–the American Pulpwood Association has come up with some interesting revelations as to how pulpwood and chips are moved to the mills in all major sections of the United States.

Transportation of pulpwood, it discloses, is a business which involves more than 50,000,000 cords a year, via two or more means of transportation. By 1960, the total will be close to 60,000,000 cords.

A substantial increase in railroad transport of chips is anticipated in the near future years, especially in hopper type cars.

Use of trucks for logs, slabs and chips, of rack cars, and also of hopper-type chip cars and barges will show big increases in near future years. On the other hand, the use of box cars and transport of wood by river drives will decline. More than half of the supply will continue to ride in trucks in one form or another.

In some areas, it is believed by individual industry leaders, that if the industry can thrash out some of its problems as regards rack cars and other issues with the major railroads, there will be even more of an increase in railroad business.

Shown here are the findings of APA's manpower and equipment survey, as they involve various classes of pulpwood transportation.

Multi-Wheel Drives Use in Logging Described

A new 16-page book on the design features and advantages of multi-wheel drive trucks for both on- and off-highway applications in firefighting, construction, road maintenance, and logging now may be obtained by writing to Four Wheel Drive Auto Co., Clintonville, Wis.

The 9x12 pages of the new FWD book show comparative design of conventional trucks and four and six-wheel-drive vehicles. Through photos and diagrams, the book also details ways in which multi-wheel drive trucks are engineered. The book is called *Plain Facts About the Advantages of Multi-Wheel Drive.*

PULPWOOD TRANSPORTATION—TOTAL UNITED STATES

	1956 Rough Cords	*1960 Requirements Rough Cords*	*1965 Requirements Rough Cords*
Truck–pulp logs or slabs	28,100,734	30,867,572	30,511,820
Truck–chips	864,445	1,358,401	1,404,708
Rack r.r. cars	14,993,012	16,256,342	16,987,884
Box r.r. cars	1,548,409	963,668	1,103,996
Gondola and other r.r. cars	3,642,267	3,693,903	3,814,047
Chip r.r. cars–hopper type	66,073	830,619	1,015,333
Chip r.r. cars–other type	1,629,707	1,873,188	1,850,981
Barges and miscellaneous	1,557,737	2,147,865	2,196,918
River drives	1,086,723	1,039,634	1,049,463
Total (includes two or more means of transportation)	53,489,107	59,031,192	59,935,150
NORTHEASTERN REGION			
Truck–pulp logs or slabs	3,335,204	3,566,031	3,937,798
Truck–chips	1,895	26,902	55,952
Rack r.r. cars	689,648	486,699	667,367
Box r.r. cars	789,702	639,882	745,101
Gondola and other r.r. cars	43,909	82,302	82,302
Chip r.r. cars–hopper type	18,945	46,100	46,100
Chip r.r. cars–other type	–	3,158	3,158
Barges and miscellaneous	41,641	41,641	41,641
River drives	710,080	670,417	680,246
Total (two or more means of transport)	5,631,024	5,663,132	6,259,665
NORTH CENTRAL REGION			
Truck–pulp logs or slabs	3,114,959	3,459,516	3,971,489
Rack r.r. cars	258,527	263,803	312,655
Box r.r. cars	7,816	–	–
Gondola and other cars	1,474,031	1,525,406	1,644,606
Barges and miscellaneous	12,805	32,346	44,071
River drives	7,426	–	–
Total (two or more means of transport)	4,875,564	5,281,071	5,972,821
SOUTH ATLANTIC REGION			
Truck–pulp logs or slabs	11,433,489	12,487,082	10,639,328
Truck–chips	38,711	133,954	142,541
Rack r.r. cars	8,065,465	8,727,184	8,878,473
Box r.r. cars	251,722	44,480	46,072
Gondola and other cars	14,752	16,152	17,096
Chip r.r. cars–hopper type	42,934	558,141	729,877
Chip r.r. cars–other type	71,042	78,191	11,295
Barges and miscellaneous	459,496	789,985	807,158
Total (two or more means of transport)	20,377,611	22,835,169	21,271,840
SOUTH CENTRAL REGION			
Truck–pulp logs or slabs	8,048,739	9,126,111	9,734,373
Truck–chips	171,947	465,033	473,703
Rack r.r. cars	5,971,169	6,670,453	7,121,186
Box r.r. cars	499,169	279,306	312,823
Chip r.r. cars–hopper type	4,194	113,510	118,426
Chip r.r. cars–other type	124,338	357,512	402,201
Barges and miscellaneous	85,260	167,584	167,584
Total (two or more means of transport)	14,904,816	17,179,509	18,330,296
WESTERN REGION			
Truck–pulp logs or slabs	2,168,343	2,228,832	2,228,832
Truck–chips	651,892	732,512	732,512
Rack railroad cars	8,203	8,203	8,203
Gondola and other cars	2,109,575	2,070,043	2,070,043
Chip r.r. cars–hopper type	–	112,868	120,930
Chip r.r. cars–other type	1,434,327	1,434,327	1,434,327
Barges and miscellaneous	958,535	1,116,309	1,136,464
River drives	369,217	369,217	369,217
Total (two or more means of transport)	7,700,092	8,072,311	8,100,528

LIFTING SEEDLINGS FOR TRANSPLANTING by one IHC 400 pulling under-cutter through growing forms. Soil is shaken from roots and seedlings placed in tubs for transportation to sorting-packing shed.

BALING 2,000 SEEDLINGS in each kraft bundle. This is next step and final one before delivery to seven planting sites.

TWO-PLANTER TECHNIQUE is used for planting loblolly and slash pine in lowlands. Two standard Lowther planters are attached to the tool bar of Caterpillar D2 tractor.

PLANTER IS PROTECTED in oak-infested uplands. From cage, he puts seedlings in ground every 6 ft.

New Planting Technique in East Texas

makes ingenious use of equipment in order to plant up to 40,000 seedlings per day in giant reforestation project

The largest concerted reforestation effort in the world took shape this season on the 660,000-acre holdings of Southwestern Settlement and Development Co. in eleven east Texas counties.

Twenty-four thousand acres of open, understocked land north of Beaumont were planted with thousands of pine seedlings per day by that division of East Texas Pulp and Paper Co., says President R. M. (Mike) Buckley. This huge undertaking is part of a five-year program to plant 120,000 acres with loblolly and slash pine.

Since average annual rainfall is almost 60 inches and soil conditions are good in this western extremity of the South's pine belt, it is expected seedlings will grow into merchantable timber within 15 to 20 years.

The planting tracts have lain in their present state since the turn of the century, when virgin stands of pine were clear-cut. Grasses took over in the lowlands and "black jack" oak moved into the hilly uplands.

On Low and High Lands

At seven sites on Southwestern's vast holdings, men and machines teamed to plant up to 48,000 seedlings per day on some sites.

Sixteen Caterpillar D2 tractors towing Lowther standard planters worked in the lowlands, while in the hilly, upland country four Cat D4 Tractors with Lowther "wildland" planters worked among "black jack" oak.

On the flat, marshy lowlands where clumps of gum and myrtle bush spring up among the mixture of blue stem, switch, Indian and Blue Panicum grasses, Southwestern is using a new technique of planting. Four D2s with tool bars pull two planters each to double the planting coverage per trip. Twelve other D2s traverse the area with single planters. The seedlings are planted every 6 f., in rows 8 ft. apart.

Lowther "vee" blades are mounted on the front of each of the D4s in the undergrowth-choked upland planting area. As the crawlers churn through the jack oak, the "vee" blades push the vegetation to either side leaving a clear path for planters.

Organization

Richard Townsend, Southwestern's chief forester, has ten district foresters, each with a 66,000-acre district, to assist in the supervision of the planting by the temporary planting staff. President of the Texas Forestry Association, Mr. Townsend is quite enthused with the mammoth plan.

Administering the overall forestry management program is W. E. Merrem, vice president of East Texas Pulp & Paper Co. and general manager of the Southwestern Settlement and Development division, and his assistant, O. R. Crawford. Under the direction Mr. Merrem, Southwestern in 1956 began construction of a 50-acre pine nursery which now furnishes the seedlings for the planting program.

Seedlings are delivered to the planting sites in bundles of 2,000. Wrapped at the nursery shipping shed in heavy kraft paper with damp moss around the roots of the young trees, the seedlings will remain in healthy condition for planting for up to two weeks. However, under the watchful eye of F. E. (Ennis) Washburn, nursery manager, the shipment of bundles to planting sites is controlled to guard against an over-supply which would result in the trees waiting two weeks before going into the ground.

Chemical Treatments

In planting areas where mature pine stands have been cut off in the last year, the seedlings are treated with BHC insecticide as they are put on the planters. This treatment is to guard against attacks by the paleas weevil.

All seedlings receive a chemical bath before leaving the nursery. They are washed with "Furmate" fungicide to prevent Southern fusiforme rust (blister rust), the second most serious Southern pine nursery disease, which is caused by Cronartium fusiforme.

During the planting season (November-February), Mr. Washburn has 50 part-time people from nearby Newton working at the nursery, in addition to five full-time assistants. Twenty men are kept busy lifting the 8- to 10-month-old seedlings from their forms, moving them to the sorting-shipping shed and packing the seedlings for shipment to the field. Thirty women sort seedlings and package them in 100-seedling bundles. In the sorting operation, substandard or deformed young trees are discarded.

Need for Nursery

The nursery came into being in 1956, when it became apparent after studies and surveys that Southwestern must grow its own planting stock if a long-range timber management plan envisioned in 1942 was to come to pass. The plan called for doubling the growth of wood per year.

The site has the capacity to produce over 40 million seedlings a year, however, crop rotation on a one-year-on and one-year-off basis cuts the actual production to around 26 million.

Two million seedlings were sold to International Paper Co., 300,000 were given to Future Farmers of America and 4-H chapters for chapter projects of tree farming in nearby communities, and 300,000 have been given to individual landowners. Southwestern has instituted the plan of giving 5,000 free seedlings to landowners who purchase 5,000 seedlings from the state nurseries. Any surplus of seedlings near the end of planting will be given to state forestry services.

Study Brunswick Operation

Last December, O. R. Crawford, assistant to Southwestern's general manager, went to Brunswick, Ga., to view results of forest site preparation experiments conducted early in 1957 at Brunswick Pulp and Paper Co. No decision has been reached by Southwestern's management whether to begin such wholesale clearing of land which is choked with non-merchantable growth, but the plan is being considered. The largest model crawler tractors were used by Brunswick.

How St. Regis Tears Down Pulpwood Piles

◄ This 30 ft. boom with spikes imbedded in it, is a "porcupine." St. Regis uses it at a barking plant at Danforth, Me., where 4 ft. wood is stacked on an ice covered pond in 70 to 80 ft. piles. After ice-out, the porcupine, coupled with a double drum winch, is used to break down stacks into a previously prepared boom.

► This shows the back-scratching action as the porcupine is pulled back and forth along the face of the pile. It is driven with a 60 hp Chrysler motor and a double drum winch. Results: A safer and faster operation. (For more details ask American Pulpwood, 220 East 42nd St., New York 17, N.Y., for Release No. 58-R9.)

New Equipment in Canada

Increasing emphasis on mechanization in Eastern Canada woods was reflected at the 40th annual meeting of the Woodlands Section, Canadian Pulp and Paper Association, at Montreal in late March.

Advantages of skidding with tractors instead of horses were outlined by K. W. Carlisle, Abitibi Power & Paper Co. T. P. McElhanney, Spruce Falls Power & Paper Co., discussed the use of tractor-mounted pulpwood loaders in the cutting strips of the pulpwood fellers.

Tests have been made with a twin-grapple loader which can handle two rows of 4-ft. logs at the same time, reported B. E. Jarvis, Canada Paper Co. A new hydraulically operated pulpwood loader was discussed by T. C. Bjerklund, Great Lakes Paper Co., and the results obtained with a new machine for loading 4 and 8-ft. pulpwood were reviewed by D. A. Ackehurst, International Paper Co. A new kind of tree-hauling track-type vehicle known as the Muskeg-8 was described by C. D. Sewell, Quebec North Shore Paper Co.

New logging techniques developed in eastern Canada were summarized by George Genge, Ontario Paper Co., who told about a machine which can carry about two cords of wood and move it over snow, muskeg and generally rough terrain.

R. N. Millman and G. D. Brown, Ontario Paper, told of a 4-mile flume moving pulpwood to the paper mill at Baie Comeau. This man-made river has an initial capacity of 100 cords an hour and ranges from 2 to 50 ft. above ground.

A visitor who addressed the meeting was F. C. Gragg of Camden, Ark., who declared that should the demand for pulpwood from the Southern states double in the next 20 years the raw material would be available.

Representing the west coast, J. S. Wilfert, Powell River Co., described a 40-ft. two-bedroom trailer which he said cost about half as much as a house providing similar accommodation for loggers.

Maxwell MacLaggen, Port Arthur, Ont., divisional woods manager for Abitibi, was re-elected chairman of the Woodlands Section. Vice chairman is J. A. Michaud, Consolidated Paper Corp.

MAXWELL MacLAGGAN —re-elected to head Canadian woodsmen

Wanted: Machine for Thinning

Horses are nuzzling their way back into the scene in logging operations in the Pacific Northwest. Weyerhaeuser Timber Co., Simpson Logging Co. and St. Paul & Tacoma Lumber Co. are all putting old Dobbin to work again, according to *The Wall Street Journal*.

But operators still hope for a machine that will do as good a job in thinning out second-growth timber—with the agility of the horse, able to work in all kinds of weather, and capable of going into thick stands of young trees without damaging standing trees.

"I doubt if any manufacturer has fully realized the potential of such a machine—and the extent to which it could be used in future thinning operations," says Ray Commer, WTCo. forester at Longview, Wash.

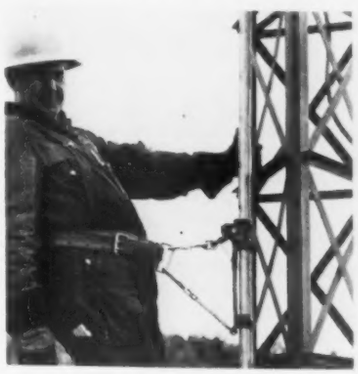
How To Protect Your Tower Climbers

If you have workmen who must climb radio transmission towers, fire towers on your timberlands or any other similar high towers, here is a safety device which Minnesota & Ontario Paper Co. is using.

Photo at left shows closeup of belt and tower safety device being worn by an M&O lineman. At right is same lineman on a 225-ft. high radio transmission tower with both hands and feet hanging free. He is supported by the device.

It locks within seven inches of the spot where a user slips or falls, and it stays locked until he has recovered his footing or has been lifted to safety. It will not slip down the ladder whether the user is conscious or unconscious.

M&O Paper Co. is using three of these devices, reports D. L. Eisenach, company safety director. They are made by Safety Tower Ladder Co., P.O. Box 1052, Burbank, Calif.



PULP & PAPER

Pulpwood Section

Forest Radio Users Are Being "Coordinated"

All licensed users of American forest products radio service are listed in a directory just published by Forest Industries Radio Communications. FIRC, headquartered at 10 East 18th Ave., Eugene, Ore., was formed on the Pacific Coast in 1947 to obtain airspace and a service classification for communications systems.

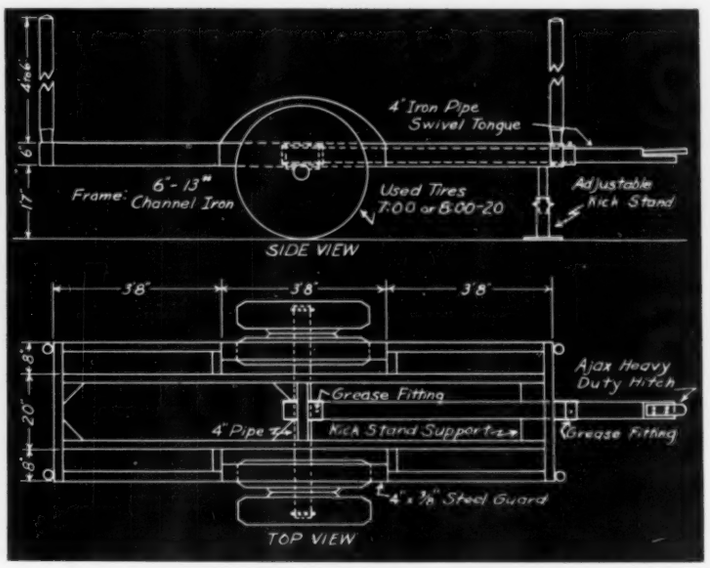
Functioning through a national executive committee headed by Chairman Robert W. Olin, Potlatch Forests, Inc., Lewiston, Idaho, the organization serves as the industry's spokesman on all matters pertaining to radio and electronic devices used in the forest products industry. The national committee "acts in the capacity of an advisory group to the Federal Communications Committee," explains Secy.-Manager Elmer Surdam, full-time member of FIRC and the committee.

A prime function of FIRC is the coordination of usable radio space. It conducts field studies and recommends rules revisions, reports on future needs of the industry, takes part in hearings, files information on engineering studies, and works with committees of the other industrial services (such as petroleum) with which airspace is shared. The association serves as a clearing house to facilitate effective functioning of radio communications in the forest industry. It acts as a guiding medium so each new applicant may be fitted into the use pattern with minimum interference to others while getting maximum benefits from the system installed.

Other members of FIRC executive committee are Philip P. Lynch, Olin Mathieson Chemical Corp., West Monroe, La., Charles Jellison, contract logger and state senator, Kalispell, Mont., W. S. Bromley, American Pulpwood Assn,, New York City, E. F. Heacox, Weyerhaeuser Timber Co., Tacoma, Wash., B. J. Shields, Minnesota & Ontario Paper Co., Minneapolis, Minn., and Oscar Levin, Simpson Olympic Tree Farm, Shelton, Wash.

Light Cart for Heavy Going

moves pulpwood load from stump to clearing in Appalachian region which is usually too rough for trucks



● Art Bennett, vice president, Armstrong Forest Co., developed this cart to move wood from stump to landings. About 25 are now in use.

These carts are rugged in construction and yet balanced so that one man can easily lift one end of the unloaded cart. Grease fittings are at two places of wear on the swivel tongue. A kickstand, mounted under the front, may be adjusted to the correct height for attaching to a tractor. Carts are very maneuverable and can be pulled any place a tractor can go. They hold damage to young reproduction to a minimum, of special value in selectively cut timber.

The carts hold about 1.5 cords of 52-in. chemi-peeled hardwood, about one half of a bobtail truckload. In small operations there is usually one cart to a crew. This cart remains attached to the tractor and is moved about as the wood is loaded directly on it. In larger operations, two or more carts are used with the tractor operator spotting them in the woods. Dual wheels are used where greater flotation is required.

A local shop in Johnsonburg, Pa., makes them for Armstrong for $175 from new materials, excluding wheels and tires. However, it would probably be more economical to fabricate them in local production areas than paying freight from Johnsonburg.

Further details on this cart are in American Pulpwood Assn. (220 E. 42nd St., N.Y.C.) report No. 58-R7.

HEAVY TD-24 HAS CLEARED "CULL" HARDWOODS from middle area in this picture taken at Champion woodlands in South Carolina. The ground will now be prepared for pine seedlings.

'DOZER HAS EXTRA 14-IN. FLANGE welded to top of the 13 ft. 11½ in. by 44 in. blade. Perforated steel grills form protective covering for front and sides of the engine. Welded steel bars protect operator from falling trees and debris. H. L. "DICK" SETZER, gen. supervisor of woods services, directed work of Champion mechanics in outfitting the bulldozer with special blade and protective baffles. Mr. Setzer is standing beside the 'dozer (at left) and is measuring height of the blade (at right).

Giant Dozer Speeds Clearing

using specially designed blade, saves time and money

On Champion Paper and Fibre Co.'s lands, near Newbury, S.C., an International Harvester TD-24 fitted with special blade, is carrying on extensive clearing operations. Use of the new bulldozer is expected to materially reduce costs and time required to clear the land.

The operation shown at Newbury, 45 miles west of Columbia, is only part of about 30,000 acres in 19 counties that Champion has under site preparation, moving ahead at about 1,300 acres a year. Weather is the only thing that holds them back.

The procedure is to first take out sawtimber, sell it to sawmills and follow with the pulpwood operation. Then machines are put to work clear-cutting, plowing and planting the areas cleared. Stumps are cut waist high rather than close to the ground to provide leverage to pry them out more easily.

Howard Smith Mills Favor Chemical Killing of Trees

Howard Smith Paper Mills and several other Eastern Canadian pulp and paper companies with extensive pulpwood stands have been carrying out far-reaching experiments in the chemical killing of trees prior to harvesting.

Between 20,000 and 35,000 cords yearly are killed chemically by Howard Smith's woodlands division.

The Howard Smith process starts with removal of a strip of bark at the base of the tree and painting a solution of sodium arsenite on the bared portion of the trunk. The tree dies as the sap spreads the poison. The tree remains standing for perhaps a year, and when it's fully dried the tree is cut and shipped to the mill.

Because of weight changes this can effect a considerable economy in truck haul cost or rail freight. Fresh cut wet wood weighs about 5,000 pounds to the cord; wood cut and piled to dry averages 4,200 pounds to the cord. Chemically killed wood weighs about 3,800 pounds, according to the Howard Smith estimate. This represents a saving of 1,200 pounds.

Those who favor the chemical killing program say that when the trees are cut, peeled and piled to dry, the operator has a considerable investment tied up in the drying wood, whereas this would be considerably reduced with chemical kill.

They add that if chemical kill can be combined in the future with partial pulping, or with some kind of debarking agent, its use can be further extended.

On the Pacific Coast chemical debarking or killing is virtually a dead issue, due in part to the introduction of the hydraulic barker.

Baggenstoss ..... Whitfield ..... Hinman

IP Chairman Accepts Award

John Hinman, chairman of the board of International Paper Co., accepts Forest Farmer Award from its director H. E. Baggenstoss citing Mr. Hinman for his "deep personal interest in forest conservation." Award was made during the Southern Forestry Conference at Monroe, La. In center is Forest Farmer Association president J. V. Whitfield.

Simpson Research Goes Hand in Hand With Management

With a considerable increase in acreage of timberland during the past several years, Simpson Timber Co. and its operating companies in Washington, Oregon and California face a big job of inventorying their newly acquired lands. Meanwhile Simpson is giving forestry research an important place in its operations, as evidenced by the establishment of the office of chief forester in the new Central Research & Development Dept. in Seattle.

The department was created during the past year as an arm of top management of Simpson Timber Co. Chief Forester Ted Yocom, previously chief forester for Ketchikan Pulp Co., acts in a staff advisory capacity working toward the ultimate goal of maximum production of company timber holdings. He works closely with the management of Simpson Logging Co. in Oregon and Washington, Simpson Paper Co. in Everett, Wash., and Simpson Redwood Co., in California.

Also in the department, headed up by former president of Simpson and current vice chairman, C. H. Kreienbaum, are Robert J. Seidl, director, central research laboratory; Don Proudfoot, head of sales research; and William McKenzie, chief of engineering. Long range plans include a laboratory facility staffed with specialists in the various fields.

Now in the planning stage is a rehabilitation program designed to transform all unstocked and poorly stocked acreage into productive timberland. First stage is a company-wide inventory program, much of it completed; a timber inventory in California has been inaugurated.

A Woodlands "How To Do It" . . .

. . . A simple, inexpensive way to reduce number of men on the work required to reduce trees to pulpwood length. A strip of heavy but flexible rubber belting (left) has been attached to the handle of this power saw. Tip of belting to tip of chain bar, quickly measures off pulpwood lengths on felled tree, enabling operator to buck it as he goes. The belt strip is flexible; does not hinder operator in brush. It was dreamed up by Quebec producer, is now being used in South.

Plenty of Timber

A new survey of Oregon's Lincoln country discloses "more timber than anyone though it had". It shows 20.5 billion board feet for the county in place of the 14 billion foot estimate made in 1942. Besides, 5 billion feet of timber has been harvested on this area during the intervening 15-year period.

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Strictly Personal

Southern

Memo from WFD

The Southern Exposure: GEORGE PURVIS, senior industrial engineer at Gaylord div. of Crown Zellerbach in Bogalusa, promoted to asst. supt. of Gaylord's Dallas plant . . . CHARLES SEWELL, native of Buford, Ga., and a graduate of Emory University in Atlanta, has been named personnel procurement director of Gulf States Paper Corp. He is a former staff analyst of Victor Tabaka and Associates, Atlanta. Mr. Tabaka is now vice president of Gulf States . . . RICHARD F. STRAW, of the Howe Scale Co., has been transferred to Atlanta, Ga. to supervise rapidly growing sales in the Southeastern states.

Eastern Engineering Co., composed of former staff members of the J. E. Sirrine Engineering Co., has been formed with offices at 90 Fairlie St., N.W., in Atlanta. Company will specialize in the design of mills and expansions in the pulp and paper field. J. W. CANTRELL is chairman and president of the new company. W. F. HUGHES is vice pres. Both have been active in Southern mill design and engineering for more than 20 years. Also on the staff are J. W. HOWARD, who has 14 years experience in the textile engineering field, and GEORGE E. DYKE, JR., who has spent 10 years specializing in engineering supervision and construction. These initial staff members have been active in work on engineering work done at Crossett, Marathon, St. Regis, Riegel and Buckeye Cellulose.

Wiley

Hall

Riegel Appoints Four . . .

A. L. Wiley was appointed assistant to the manager of paper production at Riegel Paper Corp.'s Carolina paper mill under construction at Acme, N.C. He was formerly assistant to the manager of pulp production at Acme. Raymond Hall, formerly with Allied Paper Corp., joined the Carolina div. as coating supervisor. New assistant paper mill superintendents for Carolina div. are E. A. Henry (technical) and Henry Brodnax (operations). Mr. Henry was assistant pulp mill superintendent at Carolina and Mr. Brodnax was with Potlatch Forests, Inc.

Where Was I at Eight O'Clock? Why—What Happened at Eight O'Clock?

DAN BEHNKE, formerly purchasing agent at Coosa River, then construction purchasing agent during the erection of No. 3 machine, has returned to his former role as general purchasing agent. . . . JOE GORMAN is now at Olin Mathieson's Brazilian mill in Sao Paulo. His address: Olin Kraft, S.A., Caixus Post 7225, Sao Paulo, Brazil, S.A.

HARRISON P. BALDWIN is new engineering supervisor of East Texas Pulp & Paper Co., Evadale, Tex. He went there from Hammermill Paper Co. . . . FREDERICK M. DIERKS of Dierks Paper Co., new subsidiary of the Dierks Lumber Co., has moved to Hot Springs, Ark., from company headquarters in Kansas City. Dierks' new paper mill is at Pine Bluff, Ark. . . . WILLIAM D. MAJOR is project engineer for Container Corp. of America's new mill, now operating at Brewton, Ala. He was at the Institute of Paper Chemistry in Appleton, Wis. . . .

DOROTHY RICE, wife of Chief Chemist ERIC RICE at St. Regis, Jacksonville mill won a $23,000 sable coat and $1,000 more in prizes on the "Price is Right" TV show . . . W. C. CHAPMAN has been promoted plant tech. director at Union Bag-Camp's Franklin, Va., mill. Succeeding him as asst. plant tech. director at Savannah is R. R. CHASE . . . H. T. ROBSON becomes supt. of mill technical at Savannah . . . CHARLES W. COKER, JR., has joined Sonoco Products in the standards dept. He graduated from Harvard business school. . . .

Changes in Rayonier Inc.'s southeast operations announced recently are: GEORGE E. SCOFIELD to res. mgr., Jesup, Ga., div.; BLANTON W. HASKELL to res. mgr., Fernandina div.; FRED B. DOHERTY, gen. mgr., Southeast cellulose mgr., temporarily acting as res. mgr. at Jesup, resumes his regular duties; and JOHN L. AITKENS, currently asst. chief engineer, southeast central engineering div. at Jesup, becomes acting chief engineer during an interim period. . . .

Dixie Salesmen Form Group

GEORGE HARDAKER, Southern representative for Lockport Felt Co., has been officially approved as first president of a new Southern and Southeastern salesmen's organization at its initial officers' meeting in Atlanta.

Also approved were Nopco Chemical Co.'s JOHN GAMMON, vice president, and KEN YOUNGCHILD, American Cyanamid Co., secretary-treasurer. Vince Waters, Southern Pulp & Paper Manufacturer, is permanent secretary.

Still to be approved is the official name of the organization, formed last fall at the Southern and Southeastern Supts. convention in Jacksonville. Its tentative title: Salesmen's Society to Dixie Pulp and Paper Mills. It aims to assist at the annual convention. To date, 114 Southern salesmen have joined.

Named to an executive committee are LEW COLE, four-year member; VERNON KNIGHT, Eastwood-Neally, three-year member; JACK WHITENER, Hank Jones and Co., two-year member and HERB FISHBURN, Lindsay Wire Works, one-year member.

Strictly Personal

Northeast

Memo from MRC

Right after Paper Week, many a harried soul hies himself to Florida, Mexico or the Caribbean to recuperate. GUNNAR NICHOLSON, president of Tennessee River Pulp & Paper Co., met people he had said "good-by" to in New York down in Mexico (one fellow was sitting next to him at the bullfights) and in Cuba. The T. STEWART FOSTERS (he is president of Foster Paper Co., vacationed in Monlego Bay area, Jamaica. JOE and POLLY VOIT (he's with Glidden Co.), flew down to Jamaica, then on to Haiti.

JIM RITCHIE, executive director of the U.S. Pulp Producers, has a new assistant, BILL SHUFORD. He's a business grad of the U. of Texas, has spent time in textile sales administration . . .

ALLAN HYER, vice president, The Black-Clawson Co., has retired. He started with B-C in 1918, became known as an expert in paper machines of all types. He will make his home in Hamilton, O. . . .

Ted Foster Joins Perkins-Goodwin
He has been with Foster Paper Co., Utica, N.Y. as secretary-treasurer and director, and Utica Box Co., Inc., Utica, N.Y., as treasurer and director. He joins the board sales staff of Perkins-Goodwin Co. in New York City.

George D. Knight, C. H. Dexter & Sons
has been elected a vice president and plant manager. He's a ch.e. grad from Alabama Polytech and has his ph.d. from the Institute of Paper Chemistry, joining Dexter in 1948 in research and development.

FRANCIS X. GUIMOND, pulp mfg. mgr., ADRIEN CROTEAU, kraft supt., are to be congratulated on Brown Co. having entered its second year without a lost-time accident. Two hundred thousand man hours were racked up. Singled for special commendation by Vice Pres. T. RICHARD PROBST were Asst. Supt. ROBERT MCKEE, Foremen ROMEO ROY and FRANCIS SWEENEY and Acting Foreman MORTIMER LANDERS.

WALTER D. MCVICAR, asst. mgr. for administration at West Virginia Pulp and Paper Co.'s Luke, Md., mill has moved to the New York office as asst. mgr. of commercial printing paper sales. . . . J. BICKNELL LOCKHART is now a vice president of Riegel Paper Corp., also continues as mgr. of merchant and industrial sales. FREDERICK M. JENNINGS steps up as secretary.

Congrats to RUDY GREEP, mill mgr. of Cumberland, Maine mill of S. D. Warren Co., on his election as a director. . . . Also, J. RUSSELL HOKE, vice president and treasurer, P. H. Glatfelter Co., like-

wise elected a director. . . . JOHN D. HASKELL, vice pres., The Black-Clawson Co. and president of Black-Clawson (Canada) Ltd., has retired after 37 years. He will continue as a consultant at the Dilts Division. . . . ED POOR, Hudson Pulp & Paper Corp. (Kennebec div.), says the Spring meeting of Maine-New Hampshire section of TAPPI will be held at Poland Springs, Me., June 13-14 . . . EUGENE F. DUFF, paper mill engineer for more than 50 years, with the George F. Hardy firm and later with Roderick O'Donoghue & Co., died of a heart attack March 11. . . .

FRED C. GOODWILL, resident mgr. of St. Regis Paper Co.'s. Bucksport, Maine mill, is beaming since his mill received the St. Regis printing paper division annual safety award for 1,666,079 manhours with seven lost-time injuries . . . At Syracuse U., DR. J. J. HERMANS, is new director, Cellulose Research Institute, and professor of cellulose chemistry. . . .

WALTER V. WENTWORTH, former vice pres. and mill mgr. of Penobscot Chemical Fibre Co., died at age 94 last March. . . . ROBERT W. HOUSEWORTH has joined the Fitchburg Paper family as chief industry engineer. He had been with Scott Paper Co. . . .

ALBERT BLATTMAN, vice president of Pagel, Horton & Co., Inc., has been elected president. He has been with the firm 32 years. ALEX PAGEL, former president, becomes chairman of the board. Mr. Pagel has been president since the company was established 42 years ago.

Colquist ..... Grimm

Changes at New York and Penn

Emil Colquist, superintendent at Castanea mill, New York and Penn, has retired. Walter Grimm succeeds him, and Ellis Bottorf steps up as asst. supt.

Converse Tours Africa

C. W. "BILL" CONVERSE, joint managing director of Black-Clawson International Ltd., Black-Clawson House, 18 Saville Row, London, N.W. 1, has completed a month's tour of South Africa.

He visited all but one mill in the Union of South Africa and Rhodesia. He also toured the Belgian Congo, where studies are being made to start a paper industry using papyrus grass and other local fibers.

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Officers of Salesmen's Assn. of The Paper Industry for 1958:

President—Paul C. Craig, Champion Paper & Fibre Co., Chicago.

Vice Presidents: Eastern—Joseph E. Hoffman, Standard Paper Mfg. Co., New York. Western—Bert L. Silbar, Kimberly-Clark Corp., Chicago. New England—Walter Worman II, Wheelwright Papers, Inc., Leominster, Mass. Pacific—Clark S. Johnson, St. Regis Paper Co., San Francisco.

Assistant Vice Presidents: Eastern—Jack K. Barry, Fraser Paper, Ltd., New York. Western—Edward J. Rolain, Mosinee Paper Mills Co., Chicago. Pacific—W. J. (Jack) Culverhouse, Potlatch Forests, Inc., Pomona, Cal. New England—Lawrence J. MacDonald, Lewis-Brownville Sales Inc., Boston.

Anne G. Toomey, New York, reappointed Secretary and Treasurer.

Norm Weil is Ill

Norman O. Weil, asst. vice pres., W. S. Tyler Co., and one of the most widely known affiliate leaders in the Supts. Assn., suffered a heart attack before this issue went to press and was hospitalized at Lawrence Hospital, Bronxville, N.Y. His home is Yonkers, N.Y.

Midwest

Memo from DGC

Fiber loss control methods at their mills were discussed at the March meeting of Miami Valley Supts. in Middletown, O., by Arthur Thurn, Champion Paper & Fibre Co.; Herbert Smith, Mead Corp., and William Zimmerman, Moraine Paper Co., as moderator. Speakers agreed that efficient control, good equipment, operation, education of operators, routine checks for leaks and constant testing and control of effluent are essential . . .

Charles R. Seaborne, veteran executive v.p. of Thilmany Pulp & Paper, and Mrs. S. have completed the trip of a lifetime, touring South America . . .

Ralph R. Cole, vice pres., treas. and director of Consolidated Water Power & Paper Co., Wisconsin Rapids, Wis., died March 19 of a heart attack at Delray Beach, Fla. He was 57. Mr. Cole joined Consolidated in 1927 as controller and has been a director since 1942 . . .

Roy J. Sund, exec. vice pres. of Marathon Corp. before its merger with American Can Co. last December, was elected a vice president of the can company. He has been in charge of operations, Marathon div., and will combine this function with his new position . . .

Kimberly-Clark Corp., in a reorganization of its manufacturing div., named A. D. Wilkinson, vice pres., to the new position of director of mill operations, responsible to Vice Pres. Mfg. F. H. Werling. The industrial relations dept. becomes the personnel div. and D. H. Keck is new director of personnel. . . . From the Institute of Paper Chemistry, Appleton, Wis.: Don Marth and family left for Morris, Ill., where Mr. Marth will work for the Morris Paper Co. Mr. and Mrs. Roger Somsen moved to Monroe, La. He is with Olin-Mathieson. Mr. and Mrs. Bill Wiseman are in Covington, W. Va., and he is working for West Virginia Pulp and Paper Co. . . .

John A. Aull, Jr., retired as senior vice pres. and treas. of Sorg Paper Co. and moved to Honolulu, Hawaii. He remains a member of the board. . . . Adrian Barber was appointed representative of Shuler & Benninghofen, Hamilton, O., to serve the paper industry in Minnesota, Michigan and Wisconsin. His headquarters will be in Hamilton. . . . J. Harris Tate was named vice pres. i/c mfg. and engineering for Howard Paper Mills, Inc.'s Aetna paper div. in Dayton, O. He has been with Howard 23 years.

New faces at Rhinelander Paper Co., Rhinelander, Wis., are Robert C. Rahr, sales trainee; Ralph C. Kinzel, on the staff of Ripco's research and development dept.; and William A. Moggio, asst. to Jess Holderby in Lake States Yeast Corp. . . . Wayne Back was appointed

Strictly Personal

service mgr. for Manchester Machine Co., Middletown, O. He has been with Manchester for 20 years and in papermaking and paper mill machinery for more than 25 years. . . .

AUSTIN L. HAWK, sales exec. of the Manhattan Rubber div., Raybestos-Manhattan, Inc., died of a heart attack at the age of 47 on Mar. 21. Mr. Hawk started in the Chicago office of the Manhattan Rubber div. in 1929 as a clerk. . . . RAMON R. MCNEIL was appointed research chemist at Minnesota and Ontario Paper Co., International Falls, Minn. He will work on Insulite products. He is a graduate of the U. of Detroit and was with Munising Paper Co. . . .

JACK S. DAVIS, sales mgr. of Crown Zellerbach's regional printing paper div., Chicago, and KEITH R. CUTTING, asst. regional sales mgr., are now located at the division's new offices at 36 S. Wabash Ave., Chicago. . . . JOHN E. ALEXANDER, pres. and gen. mgr. of Nekoosa-Edwards Paper Co., Port Edwards, Wis., was named citizen-of-the-year for 1957 by the Wisconsin Rapids Chamber of Commerce, for participation in community affairs, particularly for establishing a $1,300,000 YMCA recreation center for central Wisconsin. . . .

A son, named ERIK ALBERT JOHAN, was born Mar. 26 to KENNETH A. JOHNSON, asst. sales mgr., PULP & PAPER Cleveland, and his wife, PATRICIA. Weight, 7 lbs. 7 oz. The father will recover. . . .

ADRIAN BARBER is new sales rep. for Shuler & Benninghofen in Minn., Mich. and Wis. . . .

Lake States TAPPI section elected WALTER J. BUBLITZ, Kimberly-Clark, new chairman on Apr. 8, succeeding DON MACLAURIN, Gilbert Paper. ROBERT L. LEAF, JR., Shawano Paper Mills, was elected vice chairman; WILLIAM R. NELSON, Green Bay Paper & Pulp, secretary, and MALCOLM N. MAY, Inst. of Paper Chemistry, treasurer.

COMMDR. ROBERT VANDENBERG, brother of JACK VANDENBERG, Kalamazoo (Howard Smith pulp div. rep.), was critically injured in a navy plane crash in the Berkshires in western Mass., and hospitalized in North Adams, Mass. In the navy 17 years, he won air medal for valor in World War II. . . .

T. W. Dunn ..... George C. Dunn

Geo. Dunn Becomes President

Theodore W. Dunn has been elected chairman of the board of Dunn Paper Co., after serving as president since organization of the company in 1924. He also continues as treasurer. His son, George C. Dunn, who has been exec. vice president and secretary, was elected president and secretary. He has been with the company since its inception, holding various offices.

William A. Fisher is vice pres. and a director, but is not active in management. Donald J. Haines is asst. treasurer. Gladys Fockler is asst. secretary.

JOHN DAM, for many years in Kalamazoo area where he has been supt. of Allied's Monarch mill, has moved to Hamilton, O., to join Champion. . . . HENRY BONGERS, Sutherland supt. in Kalamazoo, has gone to its Ft. Orange, N.Y. div., and LESLIE JUSTICE, Ft. Orange supt., moved to the Sutherland Kalamazoo mill. . . .

Heads Chain Belt Co.

O. W. CARPENTER has been elected president of Chain Belt Co., Milwaukee, succeeding L. B. MCKNIGHT who has been president since 1953.

With Chain Belt since 1943, Mr. Carpenter's first assignment was as administrative assistant at the firm's ordnance plant. In 1947, he was elected vice president in charge of finance; in 1956 he became vice president-construction machinery and finance, and was elected executive v.p. in 1957.

Sales Manager for Unarco

ERLE T. PLUMMER has been named general sales manager of the Union Asbestos & Rubber Co.'s Fibrous Products div., according to EDWIN E. HOKIN, president. Mr. Plummer, a native of Alameda, Calif., began his business career with the Wells Fargo Bank in San Francisco in 1939. During World War II he served in the European Theatre.

He joined UNARCO in 1950 as a sales representative for the Fibrous Products div. in the San Francisco office and later served in a similar capacity in the company's Houston, Tex., office.

In March, 1955, he was promoted to assistant general sales manager with headquarters at the company's Bloomington, Ill., plant.

Lloyd Lang Dies

Lloyd Lang, recently associated with Sumner Sollitt Co., engineers, Chicago, and well known for his work in sulfite and semi-chemical pulping, died Mar. 11 at Theda Clark Hospital, Neenah, Wis.

Born Nov. 29, 1899 in Marinette, Wis., Mr. Lang spent 25 years with Kimberly-Clark, and was consultant to the U. S. Forest Products Laboratory, Crossett Paper Mills, Green Bay Paper & Pulp Co., and Improved Machinery Co.

Lamb ..... Sweig ..... Race

"Safest" St. Regis Mill

Tacoma, Wash., plant wins St. Regis's interplant safety achievement award with 5.47 frequency rate for 1957. Res. mgr. J. M. Lamb and Harry Sweig, safety director at Tacoma, receive trophy from Merlin C. Race, in charge of St. Regis national safety program.

Pacific Coast

Memo from LHB

JACK LAMB, who started his career with St. Regis as a storekeeper, is celebrating his 30th year with that company. He held the position of purchasing agent for 25 years and in 1953 became resident manager of the St. Regis, Tacoma, Wash., operations. . . . DONALD V. REDFERN of Seattle, has been elected vice president of American-Marietta Co., which plans a million dollar expansion of its adhesive, resin and chemical division research center in Seattle. He is general mgr. of the division. . . .

STANLEY G. EKSTROM, formerly of Fibreboard Central Engineering, succeeds WALTER R. DILLEY as plant engineer of No. 2 Fibreboard mill at Antioch, Calif. Mr. Dilley accepted a post with a new mill in Venezuela. . . .

RAYMOND E. LAPLANTE of Redwood City, Calif., has been made manager of West Coast sales for Brown Co., including pulp sales, announces EDWARD H. PETRICK, vice president in charge of sales. A native of New Hampshire, Mr. LaPlante joined Brown in New York after graduating from the U. of New Hampshire in 1949. Since June 1957, he has been assistant sales manager for west coast. EARL VAN POOL, for 33 years manager of West Coast sales, will continue on a part-time basis and in a consulting capacity.

Yes, sir, foam can be a *big* problem (well, maybe not quite this big).

But most paper mill men tell us it's their number one troublemaker. It doesn't take much to ruin the efficiency of pumps, screens, thickeners and paper machines.

And because every mill is different, Houghton fights foam right where it forms. When you call in the Houghton Man, he takes a sample of your stock for analysis. It guides laboratory recommendation of a De-Airex specifically for you. And it serves as a standard for laboratory tests, to see if De-Airex will be effective.

Then—and only then, after thorough laboratory testing—the Houghton Man will test De-Airex in your mill. If he can't solve your problem, it doesn't cost you a cent.

Call the Houghton Man in your area—or write today for a copy of the booklet describing "Personalized Paper Mill Service" in complete detail. E. F. Houghton & Co., 303 West Lehigh Ave., Philadelphia 33, Pa.

DE-AIREX

. . . a product of

E. F. HOUGHTON & CO.

PHILADELPHIA • CHICAGO • DETROIT • SAN FRANCISCO

Ready to give you on-the-job service . . .

PULP & PAPER

Strictly Personal

Dilley Becomes Plant Engineer at Venezuelan Mill . . .

WALTER R. DILLEY, with Fibreboard Paper Products Corp. in California (U.S.A.) for the past 11 years, joined Venezolana de Pulp y Paper C.A. as plant engineer of its new mill at Moron, Venezuela. The company, which makes paper and will later make pulp, has headquarters at Caracas. Mrs. Dilley and their two children will shortly leave Concord, Calif., to join Mr. Dilley. STANLEY G. ERSTROM, formerly of Central Engineering, Fibreboard Paper Products, succeeds Mr. Dilley as plant engineer, Antioch, Calif., board mill.

MARK E. SANFORD, vice-president and general mgr., paperboard division, Fibreboard Paper Products Corp., San Francisco, has resigned. His plans for the future are indefinite. Mr. Sanford was with the company and predecessors for 29 years. RALPH P. MC DONALD has been appointed to succeed Mr. SANFORD. Mr. Mc Donald started as a checker in the beater room of the Stockton, Calif., mill 30 years ago. His most recent assignment was manufacturing manager paperboard division, under Mr. Sanford. JACK B. MARTIN, JR., manager, Portland, Ore., Fibreboard Paper Products Corp. carton plant, reports that the 300 employes of the plant worked throughout last year without a single lost-time accident.

Executive offices of Oregon Pulp & Paper Co. and affiliate Columbia River Paper Co. and Columbia River Paper Mills are not contemplating moving from Portland, Ore., to Salem, Ore., as reported in the March issue. The Portland offices will be moved from 1029 S. W. Alder St. to S. W. Salmon St., between 11th & 12th Ave., where a lot was purchased with view to erecting a headquarters building later this year. . . .

ROBERT PLANKINGTON, asst. sulfite supervisor, and H. M. LYLE, asst. to paper mill supt., both of CZ West Linn and slated to become technical supervisor and coating supt., respectively, at Time-Crown St. Francisville mill, have joined CZ Central Research at Camas. . . . PAUL DAVIS, pulping lab section leader, promoted to asst. sulfite supervisor at CZ West Linn. . . .

JACK GILBERG, industry representative for General Chemical at Vancouver, Wash., and wife LORRAINE have a brand new household addition—their first child, a 7 lb. 9 oz. boy named JAY DOUGLAS. . . .

American Pipe & Construction Co. promotions: JOHN C. SILLIMAN, Northwest div. mgr., becomes div. vice pres., R. S. EDENS, chief engr., to production mgr., ALLEN HARDER advances to acting div. engr.; W. E. STEELE was named production mgr. of So. Calif. div. . . .

Jacoby is Quality Supervisor

Walter C. Jacoby, mgr. pulp production at CZ St. Helens, Ore., transfers to Crown's big Camas mill as supervisor—product quality & development, succeeding R. G. Mispley who advanced to CZ headquarters.

Solar Salt Co., Salt Lake City, Utah—jointly owned by Hooker Electro-chemical and Pennsalt as a safeguard supply source—elects officers: Pres.—FRED C. SHANAMAN, pres. of Pennsalt Mfg. Co. of Wash., Tacoma; vice pres.—G. A. GENTES, works mgr., Hooker Electro, Tacoma; vice pres.-gen. mgr.—A. Z. RICHARDS, JR., Salt Lake City; J. M. MCCULLOUGH, asst. sls. mgr. Pennsalt, Portland, was elected a director. . . .

HUGH C. OSBORN, Western representative of Lockport Felt Co., Portland, and wife CAROL proudly display two baby girls at their household—twins, SALLY and SUZAN, 5 lb. 10 oz. and 5 lb. 15 oz., respectively, born March 25. The Osborns previously specialized in boys, their three now ranging in age from 2 to 4½ yrs. . . .

Shuler & Benninghofen, Hamilton, O., has appointed GEORGE E. EMIGH, JR., as representative to serve the Pacific Coast paper industry. Mr. Emigh will make his headquarters in Portland, Ore. . . .

THOMAS R. STEIN, manager of the mill to be built at Sitka by Alaska Lumber & Pulp Co., recently visited Japan for an inspection of the Japanese chemical fiber industry. SAKAE FUKUYAMA, vice president of AL&PCo, who had been in Alaska during 1957, also returned to Japan. . . .

Golden Gate Meeting

Tremendous growth of uses of fiber containers and folding boxes in California was outlined at the March meeting of the new Golden Gate district of TAPPI in San Francisco by I. DARRELL SOUTHWELL, director of market research, Fibreboard Paper Products. HERBERT T. HOLBROOK, director of market development, Western Waxide div. of Crown Z, and ROLAND MEYER, of H. F. Crocker Co., also spoke. Chairman was DR. JOHN BARTON, director of research, Western Waxide, and about 120 attended.

Pecaro

McKenzie

New Officers at Flintkote . . .

George J. Pecaro was elected president of The Flintkote Co., succeeding Perce C. Rowe who resigned. George K. McKenzie succeeds Mr. Pecaro as executive vice president. Mr. Pecaro graduated from Iowa State College in 1930 and joined Flintkote in 1939. He formerly managed the Los Angeles plant. Mr. McKenzie, formerly vice president and secretary of the company, joined Flintkote in 1928.

TO HELP YOU PROCESS MORE PROFIT FROM PAPER

OK BRAND

STARCHES

the complete paper mill line...

OK Keogel – An effective cold water swelling beater additive. Simple to use ...no cooking...just add to beaters. Requires no involved equipment or cooking procedures. Disperses readily ...causes no "Fisheyes." High resistance to breakdown ... for better starch retention and higher strength tests and fiber bonding.

OK Keofilms – Complete range of controlled viscosity thin boiling starches ... adaptable to many surface sizing problems.

OK Keozyme – High purity, consistent, carefully processed corn starch for enzyme conversion. Exacting quality control to insure low residue and optimum conditions for proper enzyme action. For surface sizing or pigment coating binder this starch offers highest quality available.

OK Keoclors – A new line of oxidized starches ... for coating adhesive and surface sizing application. Surface sizing at press or calender will benefit from controlled and stable viscosity, good penetration and color. Adhesive strength and colloidal characteristics offer improved bonding and operation for medium and low solids pigments coating.

OK Keocote – Enzyme converting corn starch with lower than normal peak viscosity. Particularly adaptable to operations requiring conversions at high starch solids or in presence of pigments. Low initial viscosity permits more rapid heat transfer and even conversion.

OK Special – Starches will be formulated for your needs... phone or write for a Hubinger paper starch representative who will be glad to help you solve any starch related problem.

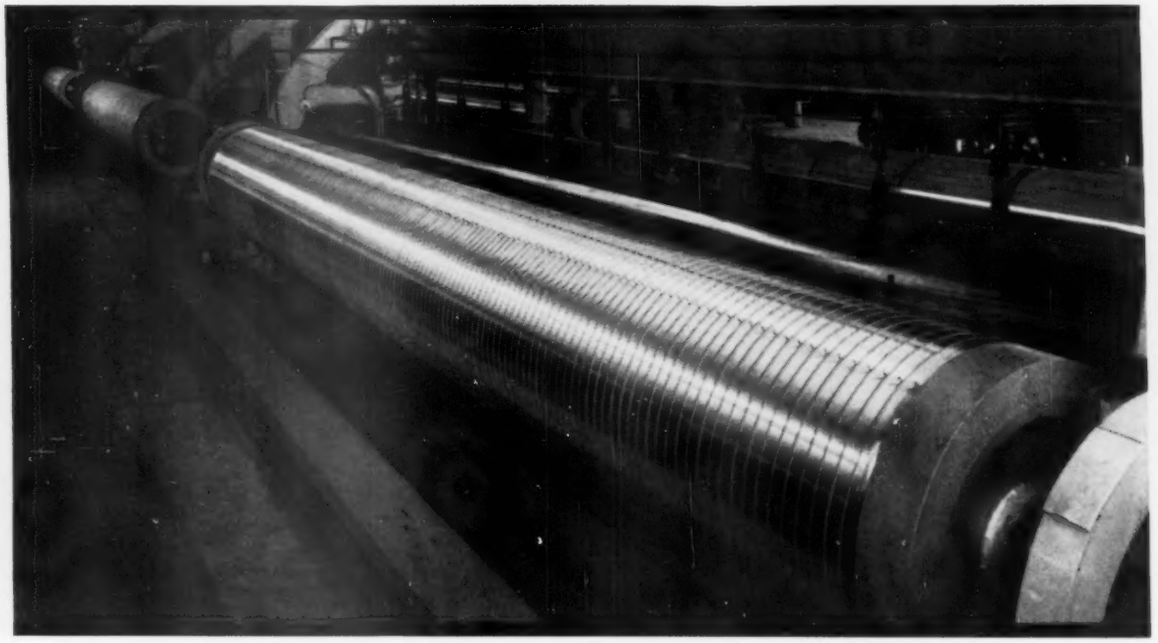
The Hubinger Company

HUBINGER 77 YEARS QUALITY PRODUCTS FROM CORN

KEOKUK, IOWA

New York • Chicago • Los Angeles • Boston • Charlotte • Philadelphia

Ever see 20,000 miles of wire? Now you have — on this AWW loom . . . enough wire to reach nearly around the world. This is one of over 100 automatic Fourdrinier wire weaving looms — in a range of widths from 100″ to 340″ — which emphasizes our ability to fill your every wire need. Emphasizes, too, AWW leadership in meeting the changing requirements of the paper industry.



Now, new Mangaloy wires created by Appleton research for greater resistance to wear in certain applications. Ask your AWW representative for details. Appleton Wire Works, Inc. General Offices, Appleton, Wis. Plants at Appleton and Montgomery, Ala. International Wire Works, Menasha, Wis., an affiliated company.

APPLETON WIRES ARE GOOD WIRES

Strictly Personal

Canada

Memo from CLS

RALPH M. GALLINGER has been named sulfite mill supt. for Howard Smith Paper Mills at Cornwall, Ont. C. R. SPAFFORD, former yard supt. there, has been promoted to yard and wood handling supt. J. M. FERGUSON is now gen. supt. of alkaline pulping at the Cornwall mill and is responsible for the soda mill, pulp drying, lignin recovery and pulp shipping. T. G. SHERIDAN has been made gen. supt. of sulfite pulping and is responsible for operation of the sulfite mill, chlorine plant and vanillin plant. He was formerly sulfite mill supt. . . . E. LORNE GOODALL, pres. of Dryden Paper Co., was recently made an honorary life member of the Dryden Rotary Club. . . .

THOMAS P. HUTCHINSON was named representative of Infilco (Canada) Ltd. in eastern Ontario, Quebec and the Maritime Provinces. He will have headquarters in Montreal. . . . WILLIAM C. FERGUSON, sales engineer for John W. Bolton & Sons, Inc., and its Emerson Mfg. Co. div. for the past 25 years, recently retired in accordance with the company's retirement plan. He has moved to 13 School St., Salem, N.H. . . .

PHILIP SANFORD has been appointed sales manager for Canada Paper Co., subsidiary of Howard Smith Paper Mills, and B. M. WOOD has been named sales manager of specialty papers div., Mr. Sanford, who has been export manager for the Arborite Co., another Howard Smith subsidiary, was in business in Scotland and the Argentine before serving with the British 8th Army in North Africa during the war. Mr. Sanford makes his headquarters in Montreal, Mr. Wood in Toronto. . . .

D. H. MAUNSELL, mill manager, Dryden Paper Co., Dryden, Ont., recently presented J. D. NICHOLSON, paper mill supt., with a plaque in recognition of the mill's 50,000 safe man-days. . . .

WIMPPI Program Set For Victoria May 15-17

A tour of the new Crofton, B. C., market pulp mill of B. C. Forest Products Ltd., will highlight a joint meeting of the West Coast organizations of the Supts. Assn., TAPPI and the Canadian Technical–Section the Western International Meeting of the Pulp and Paper Industry (WIMPPI)–at Victoria, B.C., May 15-17.

Co-chairmen will be present heads of the three groups, HENRY W. DAUTERMAN, Longview Fibre Co., of the Supts. Division; DR. NORMAN S. LEA, Scott Paper Co., of the TAPPI Section, and DR. M. WAYMAN, Columbia Cellulose Co., Ltd., of the Canadian Branch. KAY FRALICK, Morden Machines Co., will be the convention secretary.

A major interest in the west–mechanical pulp from sawdust–will be discussed by DON STEWART, Powell River Co. New sheet finishing and converting equipment is subject of a paper by RICHARD G. CARTER, Crown Zellerbach engineer. Beater testing for multi-plant pulp production by DR. JOHN MCEWEN and ERNEST QUETLIN of Weyerhaeuser; evaluation of equipment to measure pH in digesters by A. E. MARKHAM, Puget Pulp; mesh entrainment separators in evaporators by OLIVER P. MORGAN, Weyerhaeuser; Flakt drying by D. J. ROWSE, Columbia Cellulose; automatic water filtration by C. R. JOHNSON, Westminster Paper Co.; and improved starch applications by DR. T. J. SCHOCH, Corn Products, are other papers programmed.

Program chairmen are DR. J. L. KEAYS, Powell River; Glen King, Crown Zellerbach; PAUL S. BILLINGTON, Weyerhaeuser, and DR. J. L. KEAYS, Powell River.

Pulpwood Personals

BOB HARRELL, public relations specialist, has left Southern Pulpwood Conservation Assn. to return to the newspaper business . . . the SPCA has realigned its area organization. Area One now includes Arkansas, Louisiana and Texas and DON SMITH remains its forester; JIM SPIERS is forester for Area No. 2, which includes Alabama, Georgia and Florida, and YOUNG RANIER is forester for No. 3, including Tennessee, North and South Carolina nad Virginia. . . . BOB GUENTHER, JR., onetime conservation forester at West Virginia Pulp and Paper Co., Covington, has been promoted to dist. supt. in charge of wood procurement at the Mechanicville mill and he is replaced at Covington by RAY HENDRICKS, formerly with the Virginia div. of forestry. . . .W. MORRIS MORGAN, land management forester for Bowaters Southern Paper Corp. has been promoted to asst. woods mgr. of the new Catawba mill, working under HERB CURRUTH. . . .

GLENN HERZE is new chief engineer of the Hyster Co., replacing AL ZWALD who retires. Mr. Herz is a graduate of Oregon State College and joined Hyster 12 years ago. Hyster also named new regional managers in recent sales reorganization: JOHN B. HALL, eastern region; JACK GREER, midwestern; ROBERT W. HILL, southern; and DONALD SHAFFER, western. FRED F. WELCH, former mgr. of the company's San Francisco dealership, is now mgr. of the sales and service div. at Portland, Ore. . . .

GEORGE E. ARMINGTON joined Euclid Crane and Hoist Co., Euclid, O., as vice pres. i c engineering. Mr. Armington, a graduate of Ohio State U. and M.I.T. Graduate School, was one of the founders 27 years ago of Euclid Road Machinery Co., now a division of General Motors. . . .

J. B. MILLAR is new mgr. of woodlands for Kimberly-Clark Corp., Neenah, Wis. L. E. GEORGE was named chief forester. . . . W. MORRIS MORGAN was appointed asst. woods mgr. for Bowaters Carolina Corp., Catawba, S.C. . . .

Elected to head Intermountain Logging Conference, Spokane, Wash., for coming year: Pres.—EARL RITZHEIMER, log. supt. Potlatch Forests Inc., Bovill, Ida.; vice pres.—DON E. COLWELL, log. mgr. Cascade Lbr. Co. div. Boise Cascade Corp., Yakima; treas.—CHARLES J. JELLISON, contract logger, Kalispell, Mont. ROBERT NEILS, log. mgr. J. Neils Lbr. Co., div. of St. Regis Paper, Libby, Mont., was 1957-58 pres. . . .

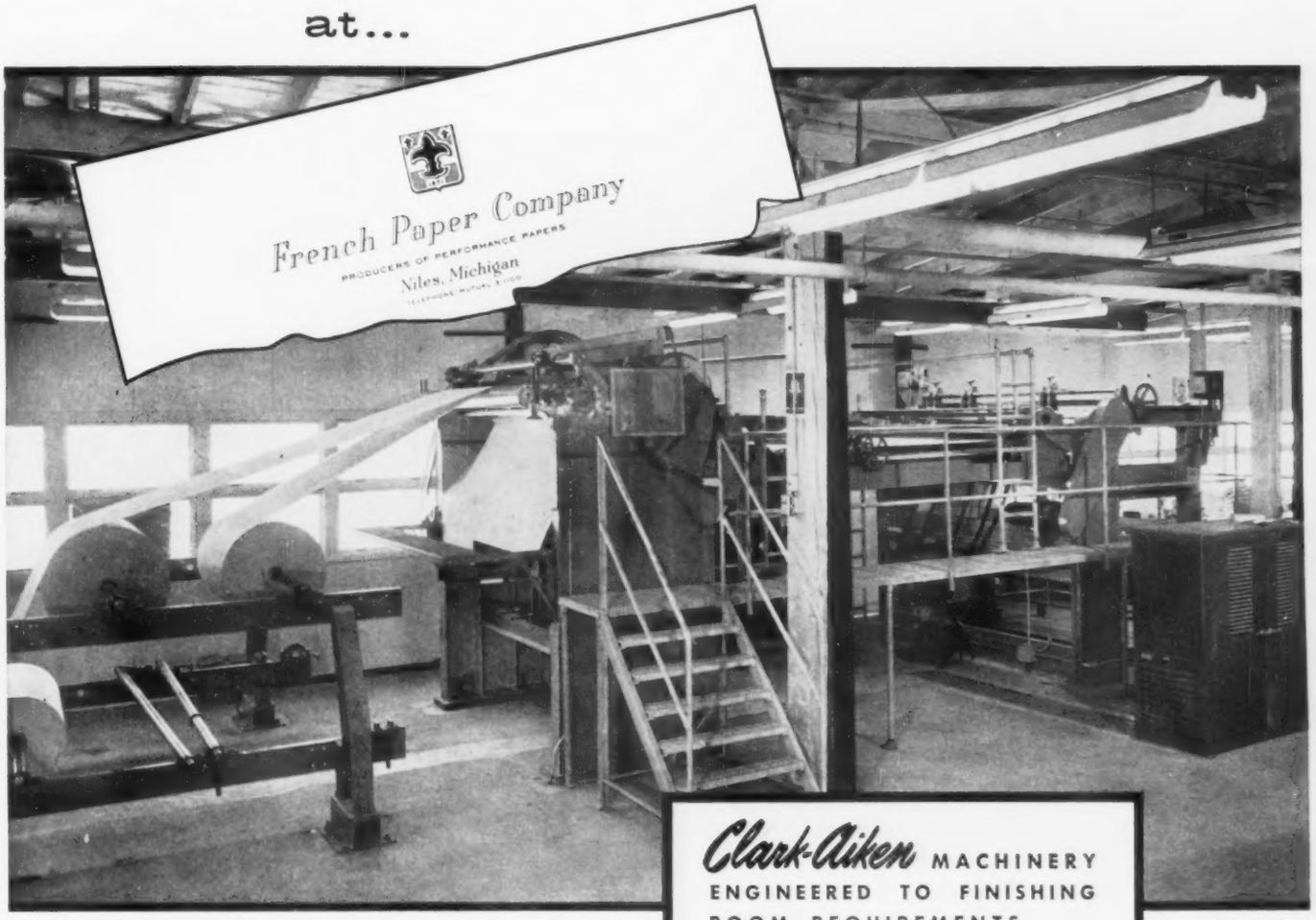
E. M. (CHET) BODDY, personnel and safety supervisor, CZ Northwest timber dept., becomes industrial relations admin. of the Northwest timber, Portland office. . . . DONALD H. BAISINGER, research forester to forest management analyst, CZ Northwest timber, Portland office. . . .

JAMES H. BELL, CZ cruiser compassman, Clatsop moves to forester, Clackamas . . . EVERETT WYCOFF, CZ timber evaluation engineer, Clatsop to resident forester, Tillamook, spending part time on Tillamook forestry operations, part on other Northwest timber divisions for special log grading and timber valuation assignment. . . .

Roger W. Wolcott, Inland Mill Division Forester . . .

. . . for Inland Container Corp., Indianapolis, Ind., will participate in wood procurement, land management and woodland practices representing Inland's interests in kraft mill operations at Macon and Rome, Ga. Mr. Wolcott, native of Cheyenne, Wyo., got b.s. in forestry in 1937. Was area forest supt. for International Paper Co., Raleigh, N.C. Will headquarter at Krannert Station, Rome, Ga.

Clark-Aiken Sheeters on-the-job at...



MR. FRANK FRENCH, PRESIDENT FRENCH PAPER COMPANY REPORTS:

"You have written in regard to our opinion of the Clark-Aiken Sheeter.

Several years ago we installed two of these in our mill, and I think the best comment that we can make is this:

1. We recently installed one of Clark-Aiken's latest machines and did not hesitate in any way to order this machine, and as a matter of fact did not even give any consideration to any other makes, although they are doubtless good, too.

2. We have recommended to our friends that they could not make any mistake in adopting a Clark-Aiken Sheeter for their needs."

We cordially invite you to visit us in Booth 1834 at the AMA Packaging Exposition in New York's Coliseum, May 26th-30th, to see the sensational new Clark-Aiken "G" Cutter and standard line of Lift Tables demonstrated.

Clark-Aiken **MACHINERY ENGINEERED TO FINISHING ROOM REQUIREMENTS**

. . . SAVES, SAVES, SAVES

There is a whole new concept in today's finishing rooms by alert management — complete engineering to provide practical automated operation. So many savings can be projected by utilizing the modern equipment now available that it means important reduction in costs. Clark-Aiken equipment plus Clark-Aiken engineering to individual requirements may be your answer to better control of your finishing room production. Your inquiry will get our immediate and interested attention.

THE *Clark-Aiken* COMPANY

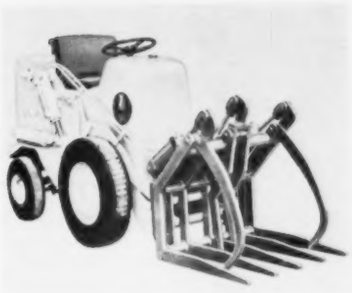
957 SPRINGFIELD ROAD

LEE, MASSACHUSETTS

New Equipment Section

Hydraulic Grab Attachment

. . . Cuts Scrap Handling Time



Applications: Handling paper trimmings and other scrap.
Advantages: New grab arrangement is designed for fast loading. Hydraulic kick-arm assures fast, clean discharge of all material when dumping. Short wheel base enables use in congested areas, in box cars and trucks, or feeding baling presses.
Specifications: Grab attachment is hydraulically controlled and is interchangeable with other attachments. Model HA Payloader with grab has carrying capacity of 1,500 lbs. and model HAH, 2,250 lbs., both with grab opening of 60 in.
Supplier: **The Frank G. Hough Co., 891 Seventh Ave., Libertyville, Ill., LIbertyville 2-4000.**

New Type Venturi

. . . Produces Lower Head Loss

Applications: For metering water, sewage, air and other fluids and gases.
Advantages: It achieves higher differential pressure or lower head loss in shorter laying length than other types. Measuring accuracy is not impaired.
Specifications: Low pressure is taken from hydraulically-streamlined body instead of from a wall. This body is in the center of the narrowest cross-section, where pressure is further lowered by locally increased velocities around it. Thus a higher differential is obtained without materially changing energy conversion in the tube, while head loss remains practically the same. By selecting proper area ratio, larger differential is obtained without increasing loss. By choosing larger area ratio, head loss is smaller. The Twin-Throat Venturi tube is available in full range of sizes.
Supplier: **Infilco Inc., P. O. Box 5033, Tucson, Ariz., MAine 3-5401.**

Pneumatic Relays

. . . Control Output, Input Ratio

Applications: Type VRR relay controls proportional relationship between two pneumatic signals when it must be changed periodically, adjusting fuel to air ratio, for example. Type VMR multiplying Relays are used where proportional relationship between two pneumatic signals must be changed only infrequently and for process control where relationship must be found after startup but, once determined, is held constant. Also used for stepping signal pressures up or down between two related systems which do not use the same signal pressure ranges.
Advantages: These instruments have a pneumatic component incorporating Republic's null-balance-vector principle for accuracy, sensitivity, compactness and interchangeability of parts. When used with other members, relays offer simplified training requirements because of their similarity.
Specifications: Range of ratios of standard VRR relay is 0 to 2:1 and dial is calibrated for 0 to 200%. Linearity is ±0.5% and dead spot is 0.1% or less of output span with any ratio from 20 to 200%. Standard units are for 3 to 15 psig. input and output ranges and require air supply at 18-20 psig. Units with other ratings available. Standard VMR relays have range of ratios of 0 to 3:1, with screwdriver adjustment for changing ratio. Linearity is ±0.5% and dead spot is 0.1% or less of output span. Pressure ratings are 40 psig max. input, 33 psig max. output air supply of 35 psig max., 18 psig. min.
Supplier: **Bulletin No. 58-2, Republic Flow Meters Co., 2240 Diversey Pky., Chicago 47, Ill., BRunswick 8-6000.**

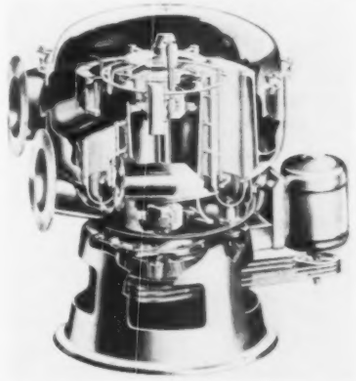
Knife Changer

. . . Is Safer, Faster

Applications: Installing and removing paper knives.
Advantages: Even the longest paper knives can be installed or removed by a single operator without injury to knife blade or operator. Alignment of knife and trimmer can be made easily while knife is on the changer.
Specifications: Knife fits into slot in changer and is held securely in vertical position during installation or removal, with its edge riding free. Rubber pads protect the knife edge.
Supplier: **John W. Bolton & Sons, Inc., Lawrence, Mass., LAwrence 6171.**

New Centriscreen

. . . Is Field-Tested



Applications: Removing shives and dirt from stock.
Advantages: Developed by Bird Machine Co. and Canadian Ingersoll-Rand Co., the Centriscreen has had over a year of continuous operation

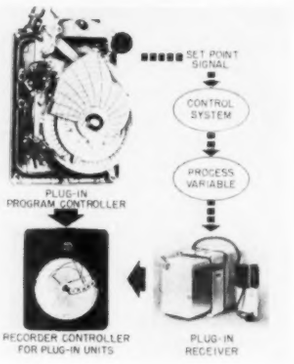
PULP & PAPER Equipment Section

and field testing. Flow is precisely controlled to divert almost all good fibers from tailings outlet, giving remarkably high consistency of tailings. Gradual flow of stock between two concentric screen cylinders, giving ample opportunity for good fibers to pass through screen openings, results in very effective removal of shives and dirt.

Specifications: Occupying only 22 sq. ft. of floor area, it provides 30 sq. ft. of screening surface in two concentric, rigidly supported, stainless steel screening cylinders, one 2 ft. and the other 3 ft. in diameter. Screen surfaces are kept clean by two double hydrofoils for each cylinder, operating at 300 rpm to produce a pulsating action. Stock enters Centriscreen tangentially through a 14-in. inlet that traps and removes heavy objects. Stock enters annular compartment between screen cylinders, passes through screen plates and to a 14-in. outlet. Rejected shives and dirt flow downward between screen cylinders and are collected and removed through a 4-in. tailings outlet.

Supplier: **Bird Machine Co., South Walpole, Mass., Walpole 400.**

Program Controller . . .
. . . Simplifies Mill Operation



Applications: In operation of digesters, controlled drying or other operations where process variables must be controlled according to fixed time schedule.

Advantages: Process variables are received, recorded and programmed within single recorder case by using program controller in conjunction with receiver-recorder. A set-point signal for controlling the process variable is produced in accordance with shape of six-in. diameter aluminum cam. Inexpensive cam is chart-printed and easily field-cut to desired shape. During programming cycle, one or two precision, snap-action switches for external functions may be operated at specified points as often as desired.

Specifications: Independent motor with separate on-off switch drives program cam at standard speed of 1, 4, 6, 8, 12, or 24 hours per revolution. Operates on 115 volts, 25, 50, or 60 cycles per second.

Supplier: **L. J. Kaiser, Bailey Meter Co., 1037 Ivanhoe Rd., Cleveland 10, O., GL 1-4600.**

Rotary Knife Cutter
. . . Is Rugged and Safe

Applications: For either shear or straight cutting.

Advantages: Heavy steel rotor is carefully machined and balanced for high speed operation and is keyed to special grade steel shaft which rotates on heavy duty anti-friction roller type bearings, mounted outboard. Special stuffing boxes keep shaft outlet dust-tight. Knives are rigidly supported on knife bars welded integrally with the frame and are equipped with micrometer adjustment which permits accurate settings with complete safety. Maintenance is simplified through use of hinged front and back knife covers which swing open independently of inlet hopper. Screens may be changed quickly without disturbing knife settings.

Specifications: Rotor is 20 in. in diameter and 30 in. long. Knives are available in carbon steel with high carbon steel inlay, with high speed steel inlay or in solid heat-treated tool steel. Screens are available up to 3/8 in. total thickness and in variety of perforations and meshes. Maximum limits for the MR are given as 900 rpm, 100 hp.

Supplier: **Sprout, Waldron & Co., Inc., 130 Logan St., Muncy, Pa., 6-3111.**

Diaphragm Valves
. . . Provide Flow Control

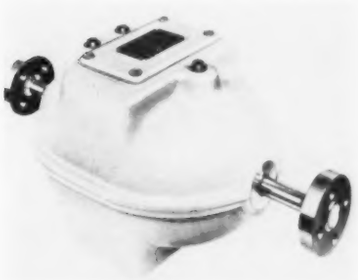
Applications: For use with steam, air, water and other liquids, particularly heavy viscous liquids.

Advantages: Valve seat is separate from push rod, free to float to a tight seat. Valve cap and diaphragm housing are bolted to valve body for extra strength and accessibility.

Specifications: Suitable for pressures up to 250 lbs., valve is available in 2, 2½ and 3 in. sizes, all screwed connections. They can be furnished with solenoid valves that provide either normally open or normally closed service. They can be coupled with solenoid valves for pilot service.

Supplier: **Johnson Corp., Three Rivers, Mich., 2-1715.**

Magnetic Flow Meter
. . . Fits Half-Inch Lines



Applications: For ratio flow control systems where small flows are ratioed to larger ones.

Advantages: Over-all accuracy of 1% of full scale throughout entire scale, no restriction of flow, linear flow readings and performance unaffected by pressure, viscosity, density or changes in conductivity of flowing liquid. Measures flow rates as low as 3 gpm.

Specifications: Transmitter unit consists of Teflon-insulated nonmagnetic flow tube containing flush-mounted metallic electrodes and surrounded by a.c. electromagnet. When conductive liquid passes through tube, alternating voltage is set up between electrodes which varies linearly in proportion to volume rate of flow. Lead wires from electrodes transmit this voltage output to a Foxboro Dynalog Recorder, producing chart record in appropriate units of flow.

Supplier: **The Foxboro Co., Foxboro, Mass., KIngswood 3-5311.**

New Weather-Protected Motor

A new weather-protected motor (Type FOD) for non-hazardous outdoor installations is announced by Allis-Chalmers Mfg. Co. Available from its Norwood Works in ratings of 250 hp and larger, the new motor is built into a rigidly constructed fabricated steel frame equipped with two removable air ducts. Capsule mounted sleeve bearings are supported by cast iron bearing brackets which close the end of the frame. Frame houses a removable pre-wound stator assembly unit. Stator leads, completely enclosed and protected, are brought to a diagonally split cast iron conduit box.

The heavy steel removable air intake ducts have openings at each end. Their design minimizes the effects of high velocity winds and minimizes the entrance of entrained moisture and particles into the electrical parts of the machine. The motor's contour provides natural drainage. Among applications now being successfully served by the motor are chemical plants, power house auxiliary drives, cooling towers and general pumping.

Meet a New Pulp Peddler . . .

This is a new sketch of HAROLD A. "RIP" SKINNER, drawn for Marathon Corp.'s Maralog. Some months ago PULP & PAPER carried the news that Rip Skinner was named Marathon's asst. pulp sales mgr., preparing to succeed Ralph Fannon, sales mgr., who is soon to retire. They report to Russell C. Flom, vice president, pulp and paper division. "Rip" Skinner started with Marathon as pulp tester on Sept. 25, 1916, and has been asst. supt. and supt. of the Rothschild, Wis., pulp mill. He has sung in church and fraternal groups for five decades. His after-hours education include correspondence courses ranging from mechanical drawing to economics. Lately his sports have been bicycling and golf. Married, he is the father of two daughters.

Wins $4,000 for Pulp Refiner

George J. Volin, a design engineer for E. D. Jones & Sons Co., was named a $4,000 second prize winner in a national contest sponsored by the James F. Lincoln Arc Welding Foundation for design of machines improved through arc welding. Mr. Volin's winning design was for a new machine to refine pulp with a new process. Welded design was used to reduce tooling and fabricating costs and to achieve strength requirements economically.

Andreas Christensen Joins Chemipulp

He recently retired as production manager at the Kimberly-Clark operated Spruce Falls Power and Paper Co., Kapuskasing, Ont., and will extend Chemipulp process service to mills in North America.

Curtiss-Wright Takes on Isotope Products in U.S.

Sales and service in the United States for Canadian Curtiss-Wright, Ltd., formerly Isotope Products, Ltd., Oakville, Ont., and for the Electronics Division, Curtiss-Wright Corp. have been consolidated under the Electronics Division at Carlstadt, N. J. Isotope Products, Ltd., recently became an 80% owned subsidiary of Curtiss-Wright, with its name being changed to Canadian Curtiss-Wright, Ltd., and assuming responsibilities for all Curtiss-Wright activities in Canada.

This merger of the two sales forces and allied functions means that customers of both firms have a service organization which has been tripled. U.S. sales and service offices will be at Carlstadt; Jackson, Miss.; Milwaukee and Portland, Ore.

Under product manager James Orr and sales manager George Butler, the Carlstadt office will supervise the entire staff. Stationed in Carlstadt for sales and service are: James Wilson, Warren Vandenboss, William John, Vincent Anas, Ernest Jahn, Edward Herman, Norman Walters, and David Kneeland. Field service supervisor is Bruce Smith. Others are Louis Tucker, Buffalo, N.Y.; Gordon Taylor, Canton, O.; Arthur Pinkham, Stockbridge, Mass.; Herbert Kissinger, Asheville, N.C.; William Betts, Jackson, Miss.; Elmer Diehl, New Orleans, La.; William Bonner and Robert Greiff, Chicago, and James Thompson, San Francisco.

Hardening Stainless Steel

Electric Steel Foundry Co. has an extensive research program on 17-4ph precipitation hardening stainless steel. The results of the first phase of the study, directed toward establishing mechanical properties atfer various heat treatments, have been published in Esco Alloy Notebook No. 5. The study includes compilation of mechanical properties after precipitation hardening at temperatures of from 800° to 1200°F in 50° steps for both cast and wrought samples. Also included are the various mechanical properties of cast 17-4ph in the as-cast and annealed conditions. For free copy write to Electric Steel Foundry Co., 2141 N.W. 25th Ave., Portland 10, Ore.

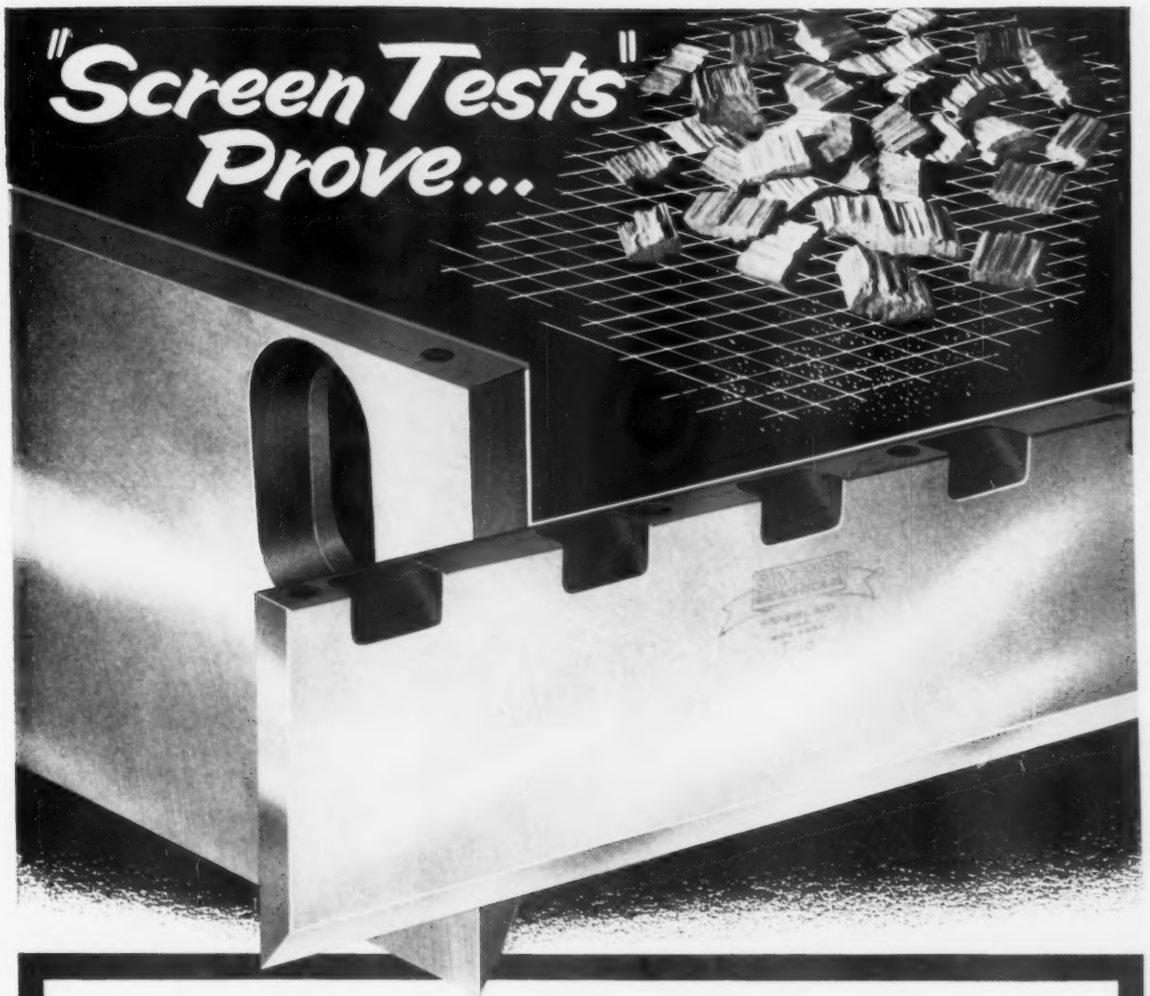
M. Clark Wakefield, Midwest Sales Mgr., Polyco-Monomer Dept., Borden Chemicals

Mr. Wakefield will supervise activities of eight sales territories from Borden Co.'s Midwest Office, in the LaSalle-Wacker Building, Chicago. His territory is from Gulf of Mexico to Canada, and from Ohio to Colorado. The Polyco-Monomer Dept. handles a full line of polymers for the paper and paperboard industries. The new district sales manager came to Borden's from Titanium Pigments. He is a graduate of Univ. of Texas.

Heads General Chemical Sales

James P. Farrell is new director of sales of General Chemical Division, Allied Chemical & Dye Corp., announces Vincent W. Suellau, Vice President.

For the past seven years, Mr. Farrell has been manager of sales of heavy chemicals including sulfuric acid, the Division's principal product. He is being succeeded in that position by Frank N. Stradling.



For Chips in Good Shape — use

SIMONDS T-18 CHIPPER KNIVES

More usable chips with less dust through the screens means a lower percentage of waste, greater chip yield and more efficient woodroom operation.

You get this with Simonds T-18 Steel Knives because they are extra tough, take high speeds and heavy cuts, have extra resistance to dulling which causes bruised chips and excess dust.

Put Simonds T-18 Knives on the job and *your* screen tests will show more and better chips, less dust, LOWER COST CUTTING.

Call your
SIMONDS
Industrial Supply
DISTRIBUTOR

SIMONDS
SAW AND STEEL CO.
FITCHBURG, MASS.

Factory Branches in Boston, Chicago, Shreveport, La., San Francisco and Portland, Oregon
Canadian Factory in Montreal, Que., Simonds Divisions: Simonds Steel Mill, Lockport, N. Y., Heller Tool Co., Newcomerstown, Ohio
Simonds Abrasive Co., Phila., Pa., and Arvida, Que., Canada

PULP & PAPER CHEMICALS COLUMN

Data on Houghton Defoamers

A new data sheet describes a full line of Houghton De-Airex paste-type defoamers. It outlines a few of the causes and results of process foam conditions, and lists by application some of the Houghton defoamers which meet such conditions successfully. It illustrates automatic dispensing equipment, of Houghton development, which continuously draws defoamer from the drum, emulsifies it, and feeds it to the process at a rate selected by the operator. Write E. F. Houghton & Co., 303 West Lehigh Ave., Philadelphia 33, Pa., for data sheet "Paste-Type De-Airex Defoamers for Paper Processing."

Insulated Trucks for Rosin

Rapid delivery of Mersize fortified rosin size by tank truck has been inaugurated by Monsanto Chemical Co. to serve paper mills in the Springfield, Mass., area. The size is shipped to the area in special tank cars which are used for storage. When needed at the mill, the Mersize is heated and shipped in specially insulated trucks by P. B. Mutrie Motor Transportation Inc., a Springfield firm. This is the fifth paper-producing area to be offered this service by Monsanto. Others are Appleton, Wis.; Seattle; Kalamazoo, Mich., and Addyston, O.

Staley Plans Pilot Plant

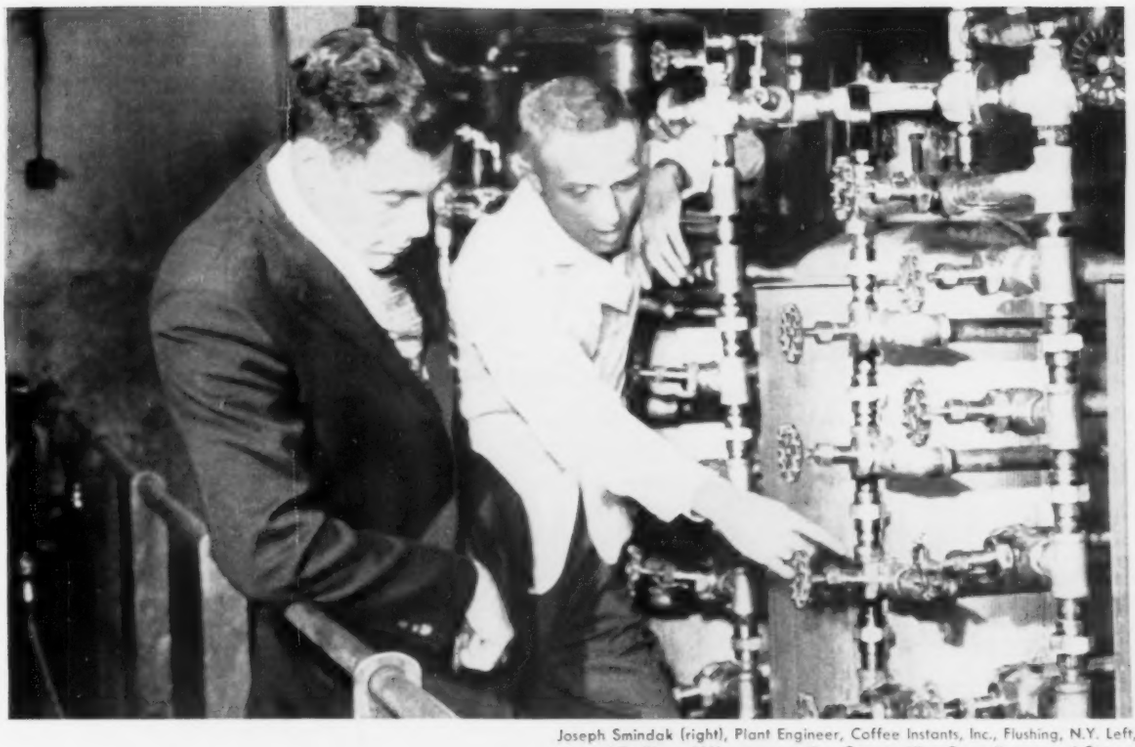
A. E. Staley Mfg. Co. plans a new three-story pilot plant annex for experimental processing and small-scale production of new products at its Decatur, Ill., plant, according to Dr. T. L. Gresham, vice pres. i/c research and development. Construction is to be completed late next fall.

New Type of Coating

A new Alkyd coating has been developed and formal announcement will be made shortly. Features: water-soluble and therefore repulpable.

Also a Paste Defoamer

Also new at Nalco is a paste type, water-base antifoam which will not polymerize on couch or press rolls. Economical Nalco 72 is also effective under pH conditions as low as 2 or as high as 12, and through wide temperature range. It has long-lasting effect, eliminating foam at screens and cylinder vats even when applied as far ahead as the thickeners. Product is blend of both anionic and non-ionic type surface active agents.



Joseph Smindak (right), Plant Engineer, Coffee Instants, Inc., Flushing, N.Y. Left, Michael De Piano, N.Y. representative, Cooper Alloy Corp. Foreground, Cooper Alloy 1" stainless Union Bonnet Globe Valves.

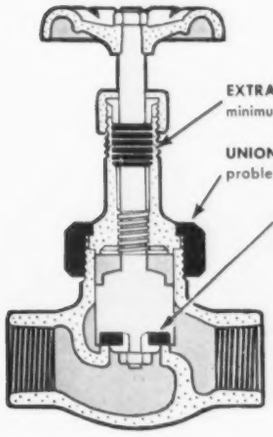
SMINDAK of COFFEE INSTANTS, INC.

Tells why he specifies Cooper Alloy for stainless steel valves and fittings

Q. Mr. Smindak, why does Coffee Instants, one of the nation's leading instant coffee processors, use stainless valves and fittings in processing their product?
A. To protect product purity, a must with us as with most other food processors. Contact with other metals can degrade flavor and aroma; stainless steel does not.

Q. Why Cooper Alloy?
A. Because of the special Cooper Alloy construction features I find combined in no other brand. On these Cooper Alloy union bonnet globe valves, for example, we like the ease of operation and the low maintenance; the fact that it removes a threaded joint from product contact; and in particular, the extra-deep square-compression stuffing box which reduces maintenance, gives a tighter seal at stem. Then too, the excellent service we get from Cooper Alloy sales people and distributors.

Q. You don't find these features in any competing valve?
A. Frankly, not one has them all. That's why, for our stainless valves *and fittings*, we insist on Cooper Alloy.



YEARS AHEAD IN DESIGN SUPERIORITY! No matter what your valve type—globes, gates, angles, checks, or Y's—the Cooper Alloy model's outstanding design features will be important to you. Cooper Alloy, with 35 years of pioneering experience in stainless steel, does not merely adapt existing brass and iron valve patterns; it creates valves *designed to be cast in stainless!* **Check the special design features of valve shown at left.**

As the little CA man below is saying: "*You Can Tell A Cooper Alloy Valve As Far As You Can See It!*" Write today for *your* copy of our folder "Design Factors In Stainless Steel Valves." The Cooper Alloy distributor near you will be glad to show you the complete line of Cooper Alloy valves *and fittings*, and their advantages. He can serve you promptly from local stocks.

COOPER ALLOY
Corporation • Hillside, New Jersey
VALVE & FITTING DIVISION
THIRTY-FIVE YEARS OF STAINLESS STEEL PIONEERING

LITERATURE

Hydraulic Lift Tables

Southworth Machine Co., Portland, Me., has issued a new eight-page, two-color booklet describing how problems of lifting, feeding and work positioning may be simplified. Complete information and specifications of Southworth's four basic series of Lift Tables, together with typical adaptations of standard models and various applications in materials handling at production equipment, are given.

Describes 3-Way Control Valves

A new 4-page specification gives full details of construction on Honeywell Series 800, 3-way control valves. Covered are both single and double-seated designs for mixing or diverting service. Included in the specification are sizes, materials, pressure ratings and cross-section drawings of body types. Request Specification S810-16 from: Minneapolis-Honeywell Regulator Co., Valve Div., Fort Washington, Pa.

Describes Steel Tubing

A new eight-page illustrated brochure describing mill grooved light weight steel tubing for use as portable pipe line with standard mechanical couplings is now available from the Steel & Tubes Division of Republic Steel Corp., 224 East 131st St., Cleveland 8, O.

The grooved-end steel tubing can be used for air lines, gathering lines, vacuum lines, paint lines, sprinkler and water supply piping, as described in the brochure. The brochure stresses the advantages of the portability offered by a piping system that can be set up and broken down in a matter of minutes.

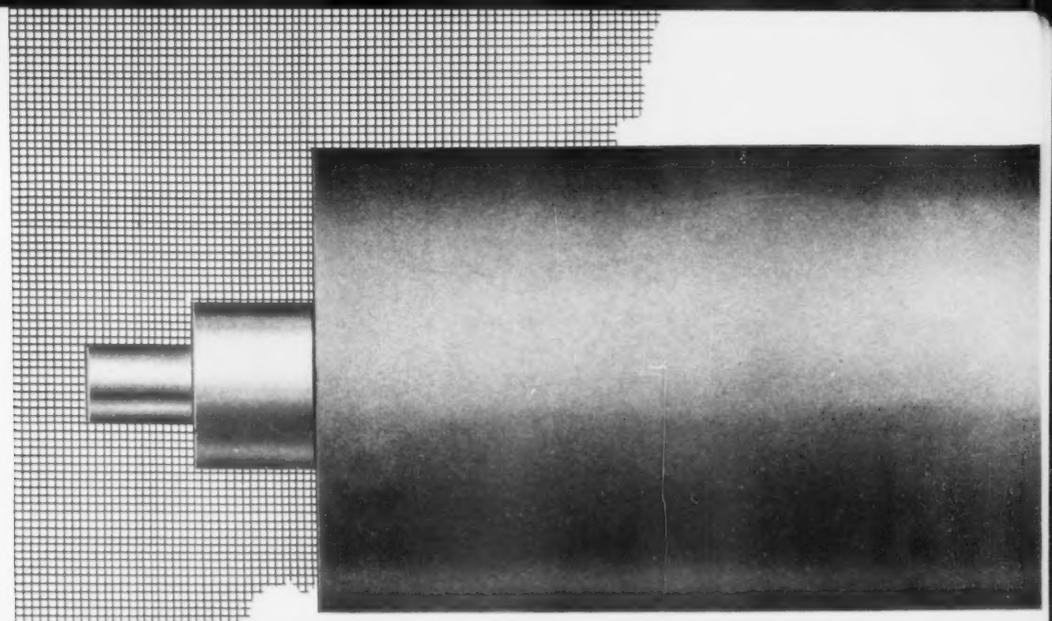
On Handling Rolls

Details of one of the nation's finest handling and storage systems for paper rolls are illustrated and described in a new Case History Report No. 36, published by Elwell-Parker Electric Co.

The report covers step-by-step activities of the New York Daily News' Newsprint Terminal where 8000 rolls are received at one time, unloaded and stored in the company's warehouse, then dispatched to downtown publishing offices. Eight sizes are handled, ranging in diameter from 30 to 38 in. Copies, free, from Elwell-Parker Electric Co., 4205 St. Clair Ave., Cleveland 3, O.

Guide on Care of Rolls

A handy pocket-size booklet "How to get Longer Life and Better Performance from Rubber Covered Rolls" is now available from Stowe-Woodward, Inc., Dept. C., 181 Oak Street, Newton Upper Falls 64, Mass.



EXCLUSIVE

NEW "Tred-Roc"

BY GRIFFITH

STONE-HARD ROLL COVERING FOR THE WIRE POSITION

The best roll ever developed for the wire position in high speed paper machines.

Its extremely hard, glossy surface virtually eliminates wire drag. Unequaled abrasion resistance assures amazingly long life and reduces costly "down" time for re-grinding or re-covering.

"Tred-Roc" is exclusive with Griffith Rubber Mills and costs no more than a standard covering.

QUALITY SERVICE 47 YEARS

Griffith®

RUBBER MILLS

General Office
2439 N.W. 22nd Avenue, Portland, Oregon
Telephone: CApitol 3-7126

Subsidiaries

CHEMICAL-PROOF CORPORATION OF SEATTLE
625 Alaska Street, Seattle, Washington
Telephone: MAin 2-5805

GRIFFITH PLASTICS
4430 Airport Way, Seattle, Washington
Telephone: MAin 3-6575
Affiliate

WESTERN PLASTICS & COATING, LTD.
408 Ewen Avenue, New Westminster,
British Columbia, Canada

Smith ..... Mordo

New Posts in New England

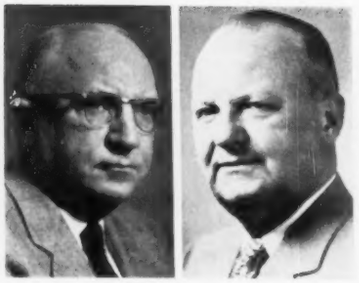
Kent W. Smith is now vice pres. of Impco, has been treasurer since 1949 and a director. Allan M. Barker succeeds him as treasurer, and Gilbert Bucknam as comptroller and asst. treas.

William H. Mordo returns to home office of Stowe-Woodward, Inc., at Newton Upper Falls, Mass., as technical service mgr., succeeding Ralph Leighton, who retires after 27 years but continues as consultant. Mr. Mordo was plant mgr. of the Neenah, Wis., plant; he joined Stowe-Woodard in 1935.

Clark ..... Morse ..... Naugler

New Huyck Felt Sales Engineers . . .

Huyck Felt Co., Rensselaer, N.Y., announces the appointment of felt sales engineers: JAMES W. CLARK for Southeastern states; BLEEKER MORSE for Southwestern states; and WARREN C. NAUGLER for Southern New England. Mr. Clark, an alumnus of New York U., joined Huyck in 1952. Mr. Morse is a graduate of Colgate U. and has been with Huyck for six years. Mr. Naugler graduated from the U. of Maine and was formerly with Eastern Corp.



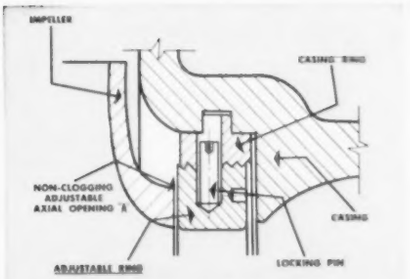
Mullin ..... Bruce

Promotions at Corn Products

MICHAEL D. MULLIN is new director of bulk product sales for Corn Products Refining Co., succeeding EDWARD W. SCHMITT who retired after 46 years' service. A 1934 graduate of Iowa State College, Mr. Mullin has worked for years in Corn Products' Central division and is well known in Mich., Ill., Ind., and Wis. THOMAS A. BRUCE succeeds Mr. Mullin as assistant to the general sales maanger. Mr. Bruce, a graduate of Bradley University, has spent 40 years with Corn Products, having started as a 15-year-old student.

Eliminate pump jamming

. . . prolong high efficiency with adjustable wearing rings



Adjusting for Wear

All you remove is the top half casing and locking pin, then turn adjustable ring to desired clearance "A". Replace locking pin in newly drilled hole. Replace casing and pump is ready.

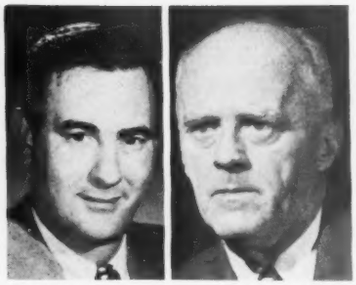
CONSTANTLY *right* clearances, non-clogging, and peak, lifetime efficiency are automatic when you specify adjustable wearing rings on Allis-Chalmers pumps.

Adjustments for wearing clearance are made without disturbing rotating elements, bearings or couplings; rings don't have to be replaced every time wear occurs; you save the cost of new rings; you save maintenance time and you get constant pump service.

Allis-Chalmers pumps with adjustable wearing rings can mean real savings to you. Call your nearby A-C office, or write Allis-Chalmers, General Products Division, Milwaukee 1, Wisconsin.

ALLIS-CHALMERS

A-5760



Clark ..... Prince

A-C Forms Engineering Group

PAUL CLARK, formerly application engineer, is supervisory engineer of new engineering service group in Allis-Chalmers electrical application dept. ROBERT PRINCE, formerly of the company's processing machinery dept., is consulting engineer. Mr. Prince has spent many years in the pulp and paper field, being prominently identified with many new inventions and developments.

Koontz ..... Herbig

Reliance Names Sales Manager

ELWOOD H. KOONTZ, district mgr. in Pittsburgh for Reliance Electric & Engineering Co. for the past four years, has moved to Chicago where he succeeds R. O. HERBIG as central west regional sales mgr. Mr. Herbig is retiring after 40 years with Reliance. He has a home at Del Ray, Fla. Mr. Koontz joined Reliance in 1936 upon graduation from M.I.T.

Bell ..... Reid

New Sales Reps in South

M. A. "BUZZ" BELL is new sales representative of Carthage Machine Co. for Fla., Ala., Miss., Tenn., Ark., La., and Tex., reporting to "Bump" Hemphill, sales mgr. In 1952 Mr. Bell formed his own wood-waste utilization business in Birmingham, representing a number of manufacturers, including Carthage. He now represents Carthage full-time.

JACK REID has been named Southern sales representative for the pulp and paper mill equipment division of Bauer Bros. Co., headquartering at 908 Montford Ave., Charlotte, N.C. A graduate of Mississippi U., he was formerly quality control supervisor for National Gypsum Co., and a sales representative for a chemical company.

Brill ..... Glauner

New Posts in Delaware

Dr. Harold C. Brill, former research supervisor in DuPont's Newark, N.J., sales service laboratory, was named manager of the paper, ink and fibers section of a new technical service laboratory of DuPont's pigments dept. at Chestnut Run, Del. Dr. Brill joined the company in 1935 after completing his education at Muskingum College and Ohio State U.

Emerson Glauner was appointed sales engineer for The Pusey and Jones Corp.'s paper machinery div., specializing in cylinder machine sales. Mr. Glauner graduated from U. of Maine and was formerly with Downingtown Machine Works. His headquarters will be at the home office in Wilmington, Del.

Predicts Rise in 1958

"It seems reasonable to expect that the North American economy will resume its normal growth pattern before the end of 1958 under the influence of an expanding population, easier borrowing conditions and large defense appropriations. The consumption of pulp and paper products will certainly be favorably affected by any improvement in general business activity."—**DOUGLAS W. AMBRIDGE**, president, Abitibi Power & Paper Co.

Stresses Product Improvement

"Today, any company which fails to improve its products continuously and to reduce its manufacturing costs cannot hope to attain a place in the forefront of American industry."—**F. K. WEYERHAEUSER**, president, Weyerhaeuser Timber Co.

Years of Serious Competition Ahead

"For the next four or five years we are going in for more seriously competitive conditions in world business than we have had at any time since the thirties. The reason isn't due so much to the fall-off in business as it is to the installation of too much producing capacity, too quickly, in nearly all industries on this continent. This situation will last for several years, not just a few months".—**ELLIOTT C. LITTLE**, president, Anglo-Canadian Pulp & Paper Mills, Quebec City.

Anderson (S.C.) Daily Mail: "The pulpwood industry, less than 20 years old in the South, is greater today in dollar value than the three previous kings in the South—cotton, tobacco and peanuts. . ."

your Aloyco sales engineer has only one business...

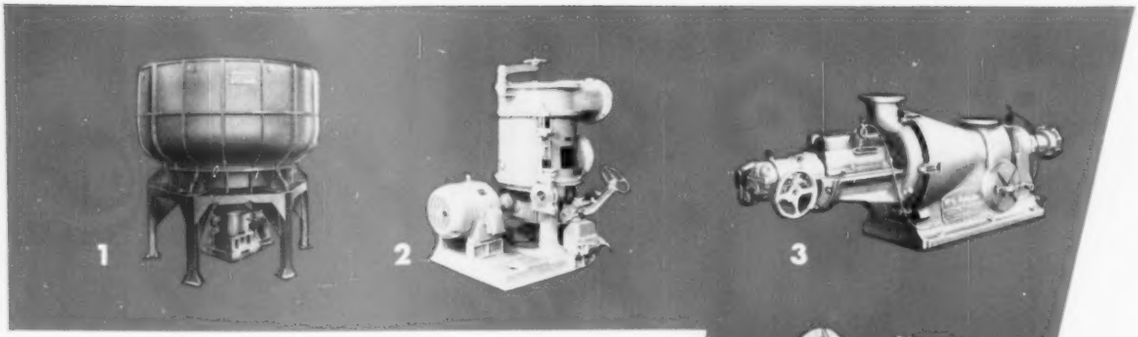
stainless steel valves

Your Aloyco sales engineer is a specialist... he handles only one line. You, as an Aloyco customer, deal directly with a man who knows his product and its application. He is equipped to get close to your problems and you'll find that this closeness to our customers goes right back to the Aloyco Plants. Doesn't it make sense to depend on the man and the company that specialize in corrosion resistant valves exclusively?

ALOYCO 503 Globe Valve... retained bonnet gasket... bolted bonnet... OS&Y... renewable Teflon disc fully retained. The Aloyco Valve line includes a wide range of alloys, types, sizes, and pressures of 150 lb, 300 lb, 600 lb and above. Nuclear Valves up to 2,500 lb.

ALLOY STEEL PRODUCTS COMPANY
Linden, New Jersey

Longer Lasting
ALOYCO
VALVES
1ST IN CORROSIVE SERVICE



Increase stock preparation efficiency 7 ways

1 Hydrapulpers® — for fast, thorough pulping, batch or continuous. Write for new Bulletin 23-SB.

2 Selectifier® **Screen** — removes foreign material, deflocks stock, improves formation. See Bulletin 18-SB.

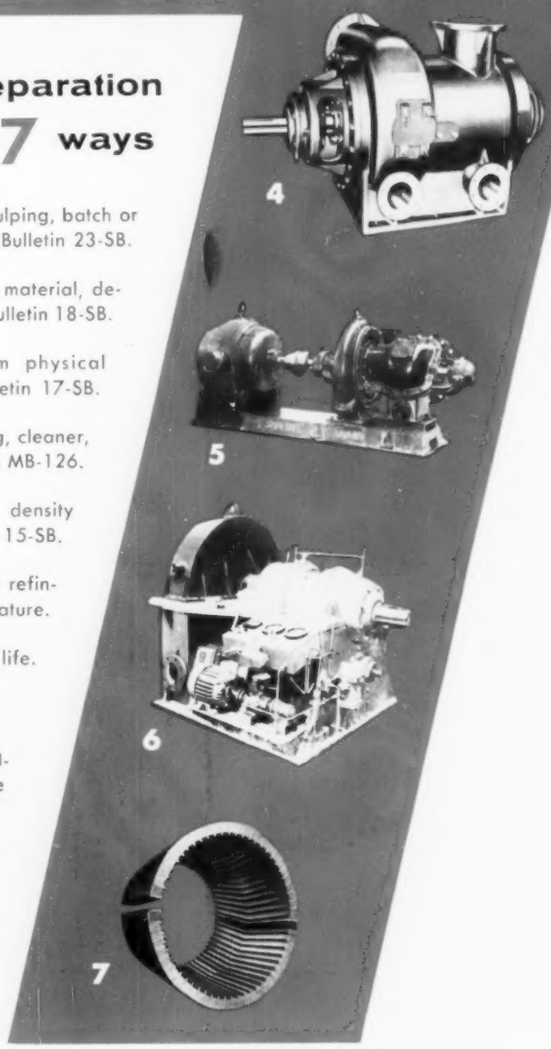
3 Hydrafiner® — developes maximum physical strength of fibers. Ask for Bulletin 17-SB.

4 Breaker Trap — for selective defibering, cleaner, high yield stocks. Described in Bulletin MB-126.

5 HMSS Pump — proven best for high density stock pumping. See Bulletin 15-SB.

6 Disc Refiner — balanced flow, uniform refining at low HP/TON. Write for literature.

7 Jordan Fillings — Bulldog for longer life.



Descriptive Bulletins listed above are available upon request. Write to the Shartle Division Sales Department.

Ask your Shartle Sales Engineer to show you how to best apply the advantages of this equipment to your mill.

THE BLACK-CLAWSON COMPANY

SHARTLE DIVISION, MIDDLETOWN, OHIO

Executive Offices—250 Park Ave., New York, N. Y. • Pandia Division, Pulp Mill Equipment, Hamilton, Ohio • Paper Machine Division, Paper and Board Machines, Watertown, N. Y. • Dilts Division, Converting Machinery, Fulton, N. Y. • Black-Clawson (Canada) Ltd., Canadian Sales & Manufacture, Montreal, P.Q. • Black-Clawson International Ltd., British-European Sales and Manufacture, London, England • District Sales Offices, Atlanta, Ga.; Downingtown, Pa.; Portland, Ore.; Appleton, Wis.; Hamilton, Ohio

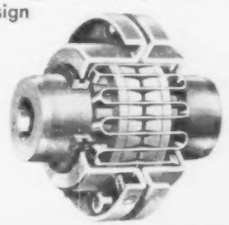
How one FALK coupling saved more than $1,000 per month

Pictured below is a Falk Steelflex Coupling assembly which connects a 2500 hp motor to a reduction unit driving an 18″ bar mill in a Midwestern steel plant. This coupling replaced another type which broke repeatedly, causing maintenance expense averaging $1,000 a month—plus costly production losses. Since installation of the Falk Coupling, with its controlled torque mechanism that disengages when a predetermined overload occurs, there has been no interruption of production. Savings in maintenance and in lost production time are well in excess of $1,000 per month...dramatic proof of the importance of coupling design!

Long coupling life is not the sole criterion of coupling performance. Inadequate shaft couplings may be the cause of bearing damage or shaft breakage on your machines. If so, a change to Falk Steelflex will give two-fold protection to your connected machines: (1) compensation for reasonable degrees of shaft misalignment, and (2) torsional resiliency to reduce peak loads as much as 30%. These advantages are as important to you as the long service life of the Falk Steelflex Coupling itself.

Falk Steelflex Couplings, in types and sizes to meet virtually all industrial applications, are promptly available from distributor, warehouse and factory stocks. Consult your Falk Representative or Authorized Falk Distributor.

Basic **Type F**—cutaway view showing exclusive grid-groove design



THE FALK STEELFLEX ...a truly flexible coupling

Here is the coupling that has all the strength of steel, yet is truly flexible. *More than a million* have been bought for industrial service of many kinds.

Because, in addition to its inherent superiorities of design, the Type F Steelflex can be used horizontally or vertically without modification or special parts, it has been adopted as standard in many plants—and by many designers and manufacturers of industrial equipment...Write for Bulletin 4100.

THE FALK CORPORATION, MILWAUKEE 1, WISCONSIN

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Representatives and Distributors in many principal cities

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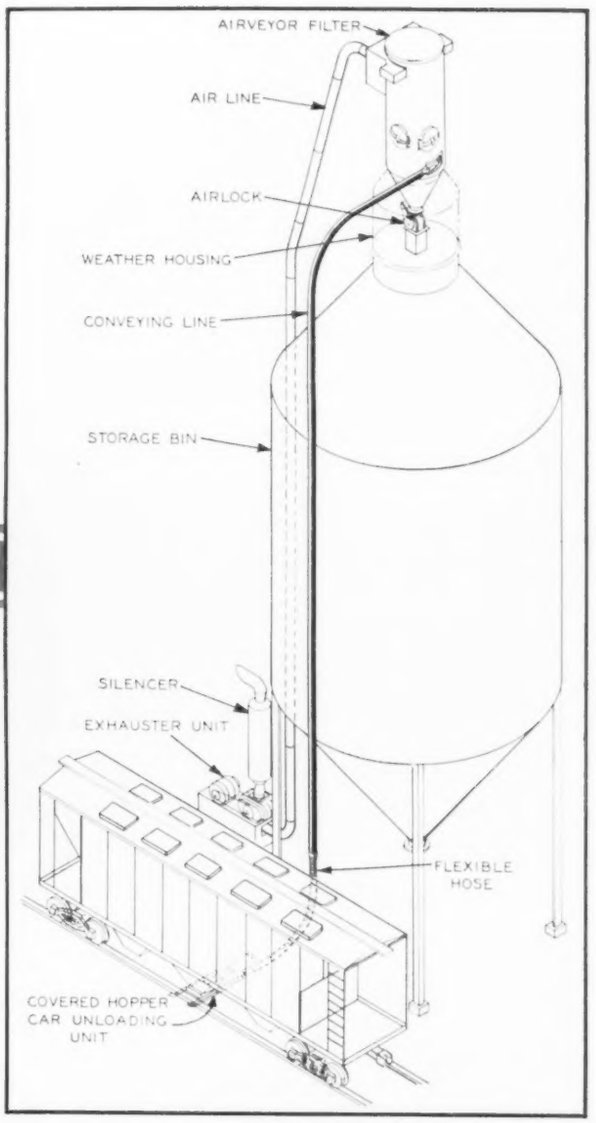

No. 6

for

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The excellent record of the Airveyor® conveying system, wherever it is used—indoors or out—goes back more than 30 years. Outstanding dependability in operation is based on practical job-rated design, plus sturdy construction, inherent in all Fuller equipment. It has raised standards of efficiency, replacing outmoded and out-worn methods of moving materials. The acceptance of the Airveyor in the pulp and paper industry is attested to by the many outstanding installations in successful operation in that field . . . over 150 in pulp and paper mills in the United States and Canada.

Illustrated is an Airveyor system installed by the Weyerhaeuser Timber Company in its Longview, Washington mill for unloading light soda ash from box or covered hopper cars, and conveying to a storage bin at rate of 12-1/2 tons an hour. This is the sixth Airveyor system purchased by this well-known company for use in its various mills.

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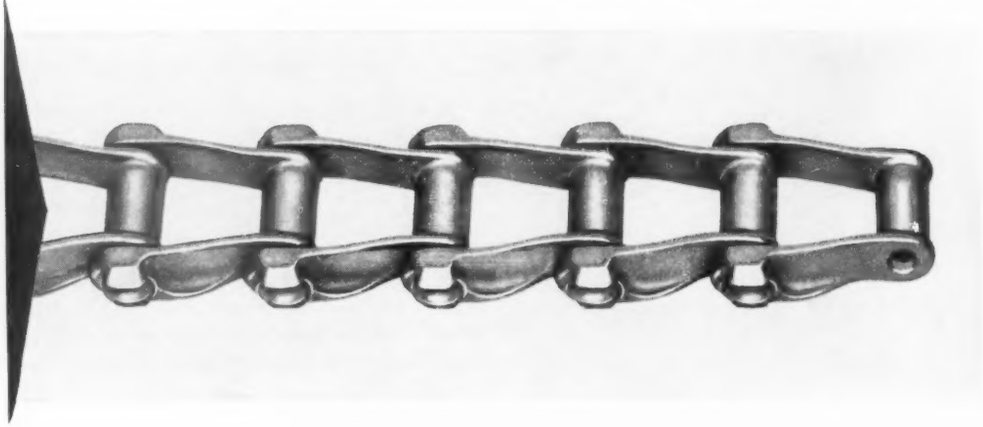
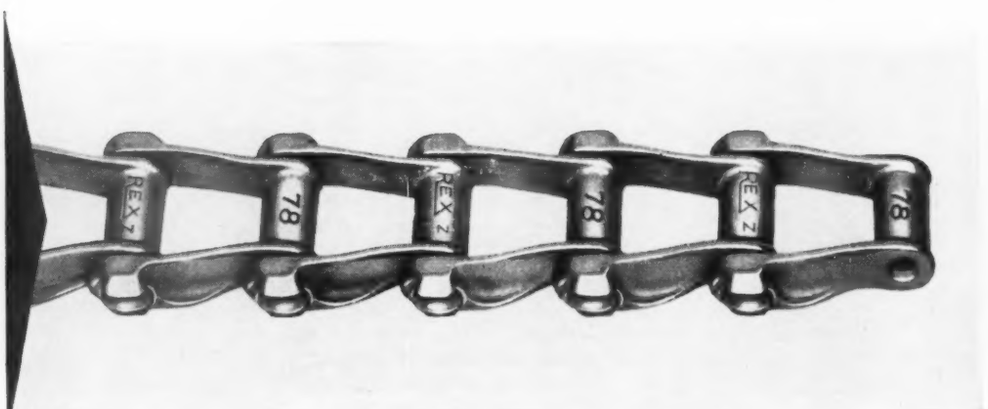
THIS CHAIN WILL FAIL



BEFORE REX® Z-METAL EVEN YIELDS



The chain in the lower picture is made of Rex Z-Metal, which offers a big *plus value* in extra life... extra service on your conveyors. The best grade of malleable iron chain will *fail* before Rex Z-Metal Chain even reaches its yield point. The table below clearly illustrates the superiority of Z-Metal for mill service.

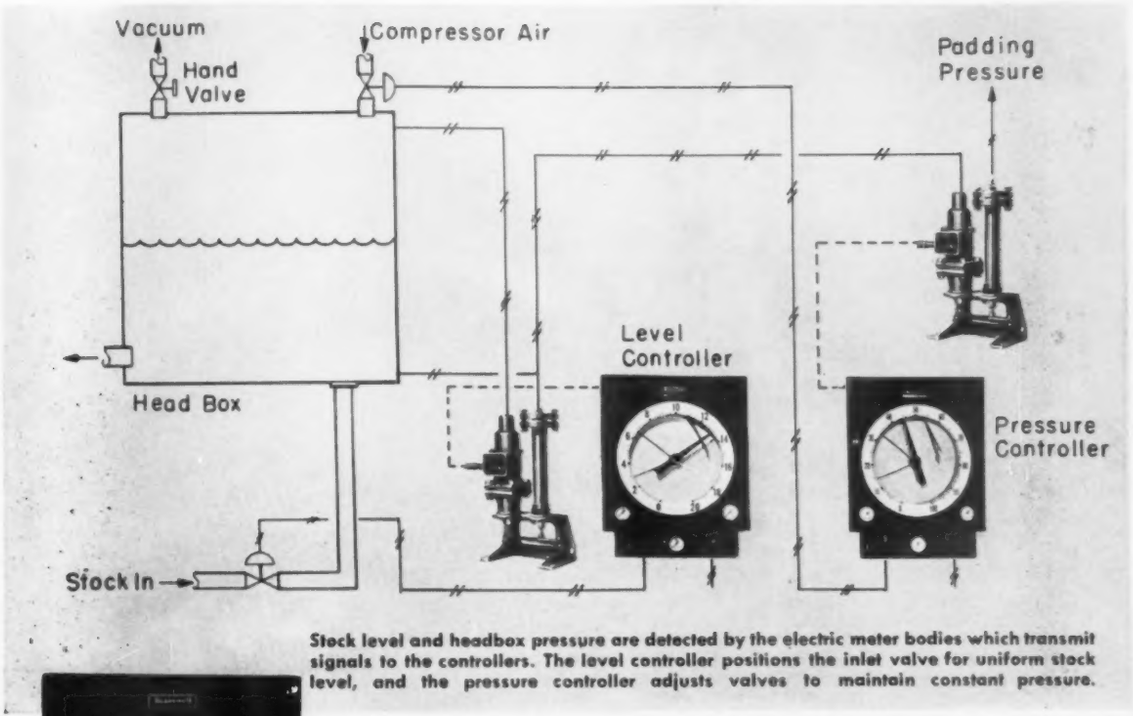
These are facts proved not only in exhaustive laboratory tests but in actual operation in mill after mill. Rex Z-Metal Chains frequently outlast malleable chains *2 to 4 times*. Remember, Rex Z-Metal resists corrosion and abrasion... important reasons why it delivers so much more service life.

For longer chain life... for greater strength, you need Rex Z-Metal Chains. Write for your copy of Bulletin No. 56-56. CHAIN Belt Co., 4691 W. Greenfield Ave., Milwaukee 1, Wis.

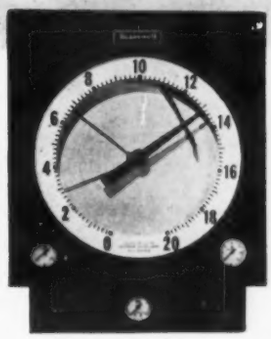
Average Comparative Mechanical Properties (Standard Test Bars)

	Ultimate Strength, Lb. per Sq. In.	Yield Point, Lb. per Sq. In.
Malleable Iron	53,000	35,000
REX Z-METAL	75,000	55,000

CHAIN BELT



Stock level and headbox pressure are detected by the electric meter bodies which transmit signals to the controllers. The level controller positions the inlet valve for uniform stock level, and the pressure controller adjusts valves to maintain constant pressure.



The most accurate pressurized headbox control system on the market

ElectroniK accuracy gives you better sheet quality

This system combines the accuracy of *ElectroniK* inductance bridge receivers with the precision of Honeywell valves and electric meter bodies —for a constant flow of furnish to the wire—for uniform basis weight and sheet thickness—for high-speed, top-quality production.

The *ElectroniK* receivers in this system are accurate within plus or minus 0.25% of scale span. A powerful, sensitive servo drive motor in each instrument positions the pen, pointer, controller, and auxiliary components. The large pointer and scale are easily readable up to 60 feet away. The electric meter bodies instantly transmit stock level and pressure to the receivers. Their accuracy is unaffected by voltage or frequency fluctuations.

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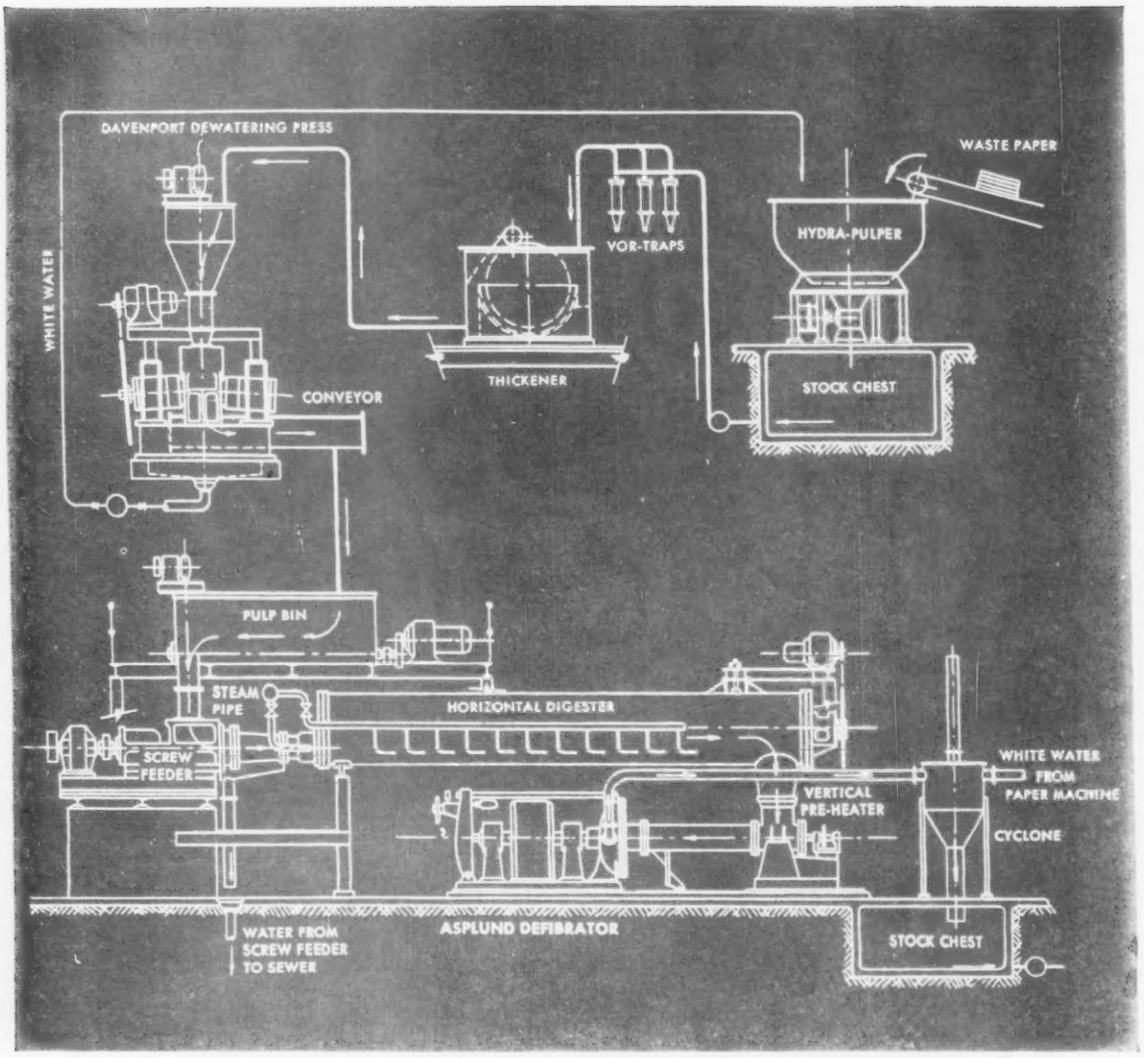
First in Controls



THE "A-D" SYSTEM DISPERSES ASPHALT IN YOUR WASTE PAPER STOCK. MORE THAN 30 INSTALLATIONS NOW IN OPERATION.

The Asphalt Dispersion System by American Defibrator for waste paper stock is shown in above flow sheet. The stock is dewatered in the Davenport Press to about 30% consistency and is then processed in the Asplund Defibrator operated under steam pressure. Asphalt, wax and similar materials are melted in the horizontal digester while the pulp is sterilized. When passing through the Defibrator discs, complete dispersion occurs.

More than thirty installations have been made since the first unit was started up in 1950. The individual capacity of these installations runs from 75 to 200 tons per day. Combined annual capacity is over one and a half million tons.

Installations fully engineered by American Defibrator, Inc.

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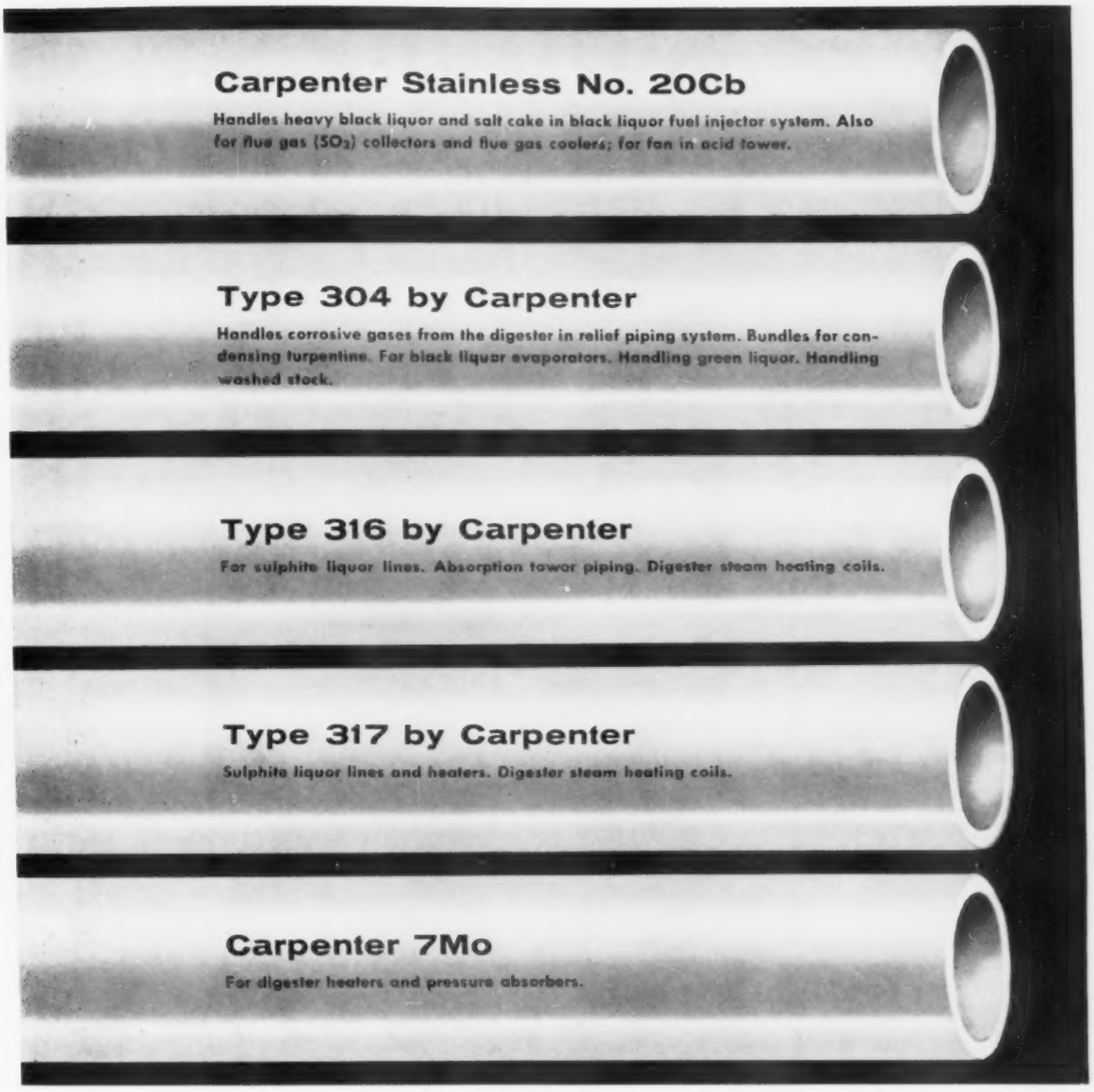

5 answers to corrosion in paper mills...

Wherever corrosion presents a problem in pulp and paper mill operations, Carpenter Welded Stainless Tubing and Pipe can give you the answer because it's full finished, cold drawn or cold worked, stress relieved, pickled and passivated for *positive* long life.

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Simplify control problems...

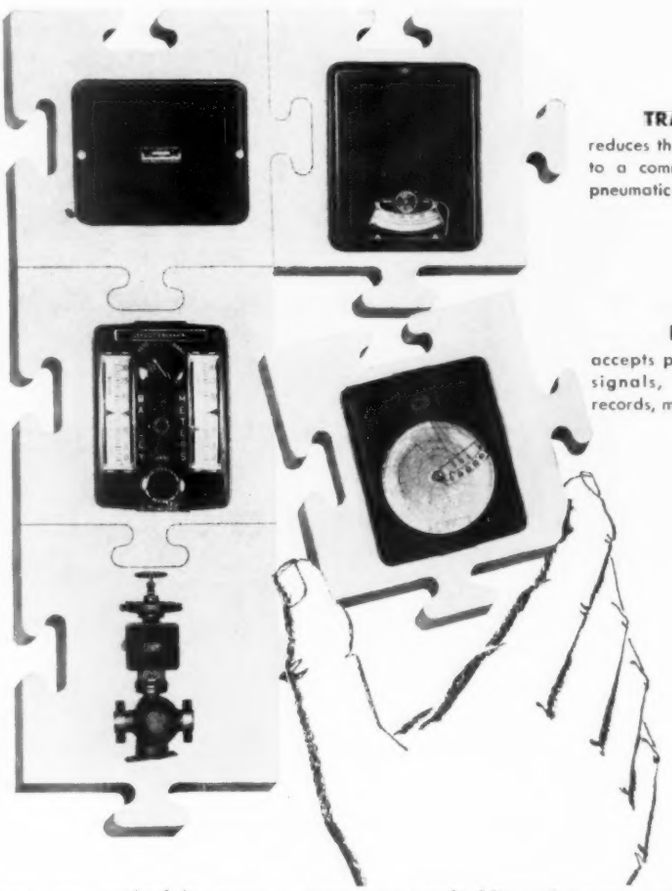
with the Bailey Building Block Method

Control problems are greatly simplified when you attack them using the Bailey Building Block Method. In a nutshell, the method consists of using standard components that fit together like building blocks. Virtually any control requirement can be handled by selecting standard components. Here are the parts you use and the functions they perform.

CONTROL RELAY
takes signals from the transmitter and computes corrective action in terms of pneumatic signals.

SELECTOR STATION
gives operator choice of hand or automatic control including set-point or bias adjustments.

POWER UNIT
is the "muscle" of the system. It performs whatever precise mechanical action is necessary to achieve control.



TRANSMITTER
reduces the measured variable to a common denominator, a pneumatic or electric signal.

RECEIVER
accepts pneumatic or electric signals, indicates and/or records, measurements.

Not all these components are required in every control system. You buy only what *your* system needs. When you change processes or add more automatic control, you can add additional standard components. Sometimes you may want to build a whole new system, re-using some of the existing components and adding other new ones. Spare parts inventory and maintenance training are reduced.

Hear the complete story of the Bailey Building Block System. Find how it can solve your control problems. See your Bailey Engineer or write for more information.

P40-1

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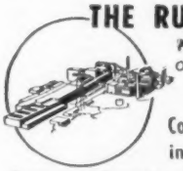
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The Last Word — PULP & PAPER — Editors' Page

Bill Davis—Rugged Individualist

This industry lost its greatest rugged individualist on Mar. 19 when William P. Davis, president and general mgr., Potlatch Forests Inc., died of a kidney ailment in Lewiston, Ida. He was buried at Moss Point, La., where he started in the industry as a lowly oiler in the power house in 1918. He studied nights and put himself through Mississippi A&M, earning an e.e. degree. Before long he was running that power house.

When International Paper bought Moss Point from the English owner, it started moving Bill Davis up. He rose to chief engineer, coming along under Erling Riis. He built Springhill and the second unit of Georgetown and had his hand in other new I.P. mills. He went to New York as general manager of the I.P. Container Division in 1940. Then Potlatch called him west in 1949 to run that great company and put it into the pulp and paper business. He was an original creator and builder, as the Potlatch mill proved.

He had a consuming devotion to his work; otherwise he might have lived more than 60 years. Whatever faults he had, he was no quibbler. You always knew where Bill Davis stood. We liked him. He liked PULP & PAPER and selected it as the exclusive medium for some of the most important stories which he had created.

PULP & PAPER Wins Editorial Honor

The entire PULP & PAPER staff is proud that one of its articles on coating has been selected as a winner by the judges for "Graphic Arts Progress–1958."

PULP & PAPER, in recent years, has brought news of many important events in graphic arts and coating to attention of the growing segment of this industry which is vitally interested in those fields. In these days, with stress on new markets and quality, rather than production, coating promises to be one of the fastest growing fields of activity for this industry.

The article which won this honor is "What Today's Highspeed Letterpress Printed Require in Coated Papers," written by Alex Glassman, paper specialist for R. R. Donnelley & Sons, Chicago (Apr. 1957 issue). He told how West Virginia Pulp and Paper Co., Kimberly-Clark Corp., and others cooperated with Donnelley in improving research and testing methods. The article was an expansion of previous work by Mr. Glassman and brought his work up to date.

Why a Forest "Czar" in British Columbia?

When the British Columbia government announced recently that Judge Gordon Sloan had been hired at $50,000 a year to act as forestry advisor, there was naturally a good deal of speculation as to just what the judge would be doing to earn that money.

Early announcements indicated that Mr. Sloan, who set a precedent by resigning as chief justice of the supreme court to accept the position, would be a "czar" of the industry, with almost dictatorial powers over administration of the forests.

Not until Minister of Forests R. G. Williston addressed a meeting of loggers in Vancouver were the duties of Mr. Sloan spelled out officially. Mr. Williston emphasized that the ex-judge was not going to be a member of the civil service or an employe of the government in the usual sense. He would, in effect, function as a sort of permanent royal commissioner to keep the government posted on policy matters and make his recommendations either on his own initiative or at the request of the government.

If he considers that public interest justifies it, Mr. Sloan may call public hearings to investigate any phase of forest operations in the province.

Presumably, Mr. Sloan will soon take steps to appoint advisory groups, as recommended in the exhaustive report which he submitted to the government recently bearing on all phases of forest administration.

Generally speaking, industry approves the appointment and the job, although there has been some criticism on the ground that Mr. Sloan is, after all, not a practical forester or operator and that it would probably have cost the government a good deal less to obtain similar service from another panel of advisors. However, no one challenges Mr. Sloan's success in investigating the industry on two different occasions nor his integrity and all-around capacity.

With forest administration in a somewhat confused state in British Columbia as a result of the Sommers scandal, the squabble over management licenses and other problems, the government probably could not have chosen an advisor better qualified to restore order and stability in B.C.'s No. 1 industry.

Pulp and Paper Day in South

Very timely and potent with long term benefits was the decision of Southern mills to sponsor a Pulp and Paper Day throughout the South on Apr. 15. The South's pulp and paper industry and its economic contributions were advertised in 1,500 newspapers. In many other ways the South learned of the importance of this industry to its welfare and growth.

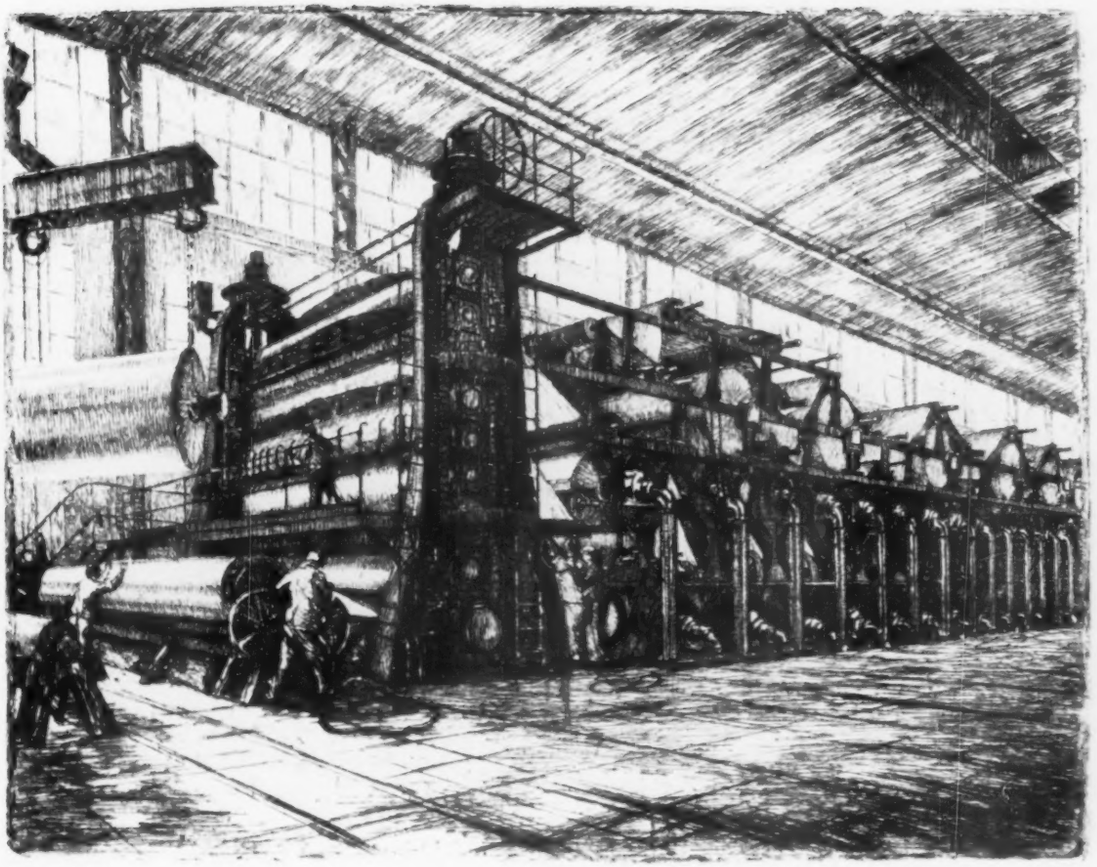
"House-Warming" in Portland, Ore.

To better serve the fast growing Pacific Coast section of this industry, PULP & PAPER and its affiliated Miller Freeman Publications have a new home at 731 S. W. Oak St., Portland, Ore.

Louis H. Blackerby, Western editor for PULP & PAPER, maintains his headquarters in the new offices. He is now in his 18th year of service in covering the Far Western pulp and paper and paperboard mills and logging operations. This excepts 40 months of wartime military service in both Pacific and European theaters with forestry engineering units. He is a 1939 forestry graduate of Oregon State College.

Our staff was very pleased that many old friends of PULP & PAPER in this industry and in affiliated industries were able to attend the recent "open house" for the new offices. William B. Freeman, president; Lawrence K. Smith, vice president and a founder of PULP & PAPER some 34 years ago; Edgar P. Hoener, vice president, and Miller Freeman, Jr., secretary-treasurer, all officers of MF Publications, were on hand to greet guests, as was Mr. Blackerby.

Other PULP & PAPER and Miller Freeman Publications offices are in Chicago, New York, San Francisco, London (England), Atlanta, Cleveland, Los Angeles, Seattle and Vancouver (Canada).



"Dry End" Original etching by Paul Winkler-Leers from the Asten-Hill collection.

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